THE UNIVERSITY
of EDINBURGH

An exploration of explicit and implicit emotion in adult survivors of childhood sexual abuse

Eimear McKay

Doctorate in Clinical Psychology

University of Edinburgh

August 2012

THESIS ABSTRACT

Background: Childhood sexual abuse (CSA) has the potential to compromise the socio-emotional development of the victim resulting in an increased vulnerability to difficulties regulating emotions and one's sense of self. Emotion is thought to play a key part in a number of psychological disorders which CSA survivors are at increased risk of developing. A better understanding of the basic emotions experienced in this population and emotion regulation will inform current treatment.

Aims: This research aimed to develop a better understanding of the emotions experienced by survivors of CSA and the relationship between "implicit" and explicit emotions and psychopathology.

Method: Two empirical studies were conducted. Study 1 employed a cross-sectional consecutive case series design involving 109 survivors of CSA. Participants completed a set of measures relating to basic emotions, emotion regulation and symptoms. Exploratory factor analyses were conducted on the Basic Emotions scale (BES). Regression analyses were used to explore the relationship between emotions experienced, emotion regulation strategies and psychological symptoms. Study 2 examined basic emotions, "implicit disgust self-concept" and psychopathology in a population of CSA survivors (n=26) and a group of individuals currently receiving psychological therapy who reported that they had not experienced childhood trauma (n=25). Participants completed self-report measures pertaining to emotion, emotion regulation, symptoms and cognitive fusion. Participants also completed an implicit association test.

Results: Exploratory factor analyses supported the structure of three versions of the BES-Weekly, General, and Coping in a sample of survivors of childhood sexual abuse. In all three versions of the scale, disgust explained the largest proportion of variance. The basic emotions of sadness, fear and disgust as well as external dysfunctional coping strategies appear to predict PTSD symptomatology in this sample. The results of Study 2 also support the finding that self-reported disgust is prominent in the emotion profile of CSA survivors. Implicit disgust self-concept was not significantly correlated with other emotions or psychopathology. However, implicit disgust self-concept was found to be significantly associated with cognitive fusion.

Discussion: Psychotherapeutic approaches for survivors of childhood sexual abuse should address the emotional experience of this population. In particular, these findings suggest that sadness and disgust should be targeted in therapy.

TABLE OF CONTENTS

Word limit (excluding references and appendices): 34239

DECLARATION

I declare that I am the sole author of this thesis and that the work contained within this document is my own. This thesis or any part of it has not been submitted for any other degree or professional qualifications.

D. Clin. Psychol. Declaration of own work

This sheet must be filled in (each box ticked to show that the condition has been met), signed and dated, and included with all assessments - work will not be marked unless this is done

Name: Eimear McKay

Assessed work: Thesis

Title of work: An exploration of explicit and implicit emotion in adult survivors of childhood sexual abuse

I confirm that all this work is my own except where indicated, and that I have:

- Read and understood the Plagiarism Rules and Regulations ☑
- Composed and undertaken the work myself ☑
- Clearly referenced/listed all sources as appropriate ☑
- Referenced and put in inverted commas any quoted text of more than three words (from books, web, etc) ☑
- Given the sources of all pictures, data etc. that are not my own ☑
- Not made undue use of essay(s) of any other student(s) either past or present (or where used, this has been referenced appropriately) ☑
- Not sought or used the help of any external professional agencies for the work (or where used, this has been referenced appropriately) ☑
- Not submitted the work for any other degree or professional qualification except as specified ☑
- Acknowledged in appropriate places any help that I have received from others (e.g. fellow students, technicians, statisticians, external sources) ☑
- Complied with other plagiarism criteria specified in the Programme Handbook ☑
- I understand that any false claim for this work will be penalised in accordance with the University regulations ☑

Signature ……(Eimear McKay) **Date**: 15th August 2012

ACKNOWLEDGEMENTS

First, I would like to thank all the survivors of childhood sexual abuse and those referred to the Clinical Psychology service who gave up their time to participate. My sincerest thanks also go to all the staff who were involved in recruiting participants, including my NHS colleagues, Lothian Psychotherapy Department and the absolutely sterling efforts of those who work for Safe Space and Kingdom Abuse Survivors Project. Your dedication, belief in the importance of research in this area and encouragement has been inspiring. Without you, this thesis would not have happened.

I would like to extend my sincere gratitude and appreciation for the patient, consistent support and guidance that I have received from Dr. Andy Summers (clinical thesis supervisor and Line manager), Professor Mick Power as my academic supervisor and Professor Thanos Karatzias (clinical thesis supervisor). I also wish to thank Dr Oonagh Williamson, Dr Kathryn Quinn and Dr Katherine Cheshire for their support. I feel privileged to complete my training in such a supportive and enabling environment.

Special thanks go to my parents, siblings, wider family and friends who have been so encouraging and provided a much needed distraction and sense of perspective during this research. Especially, to mum and dad, their example of hard work and compassion towards others has guided me towards this career. And of course, thank you to Granny Bug - her "can do" attitude has always been an inspiration! Thank you also to Helen, for all her lovely cards, generosity and reminders to take a break and relax!

A special mention must go to Lucy! Very long days in the library and Teviot were made so much easier with your company, our microwave dinners for two, overpriced coffees and laughter! ☺

I owe an absolutely HUGE THANK YOU to my fiancé, Matt, who has supported me not only in the completion of this research but throughout my clinical training. Your constant support, patience, positivity, generosity, proof-reading, house-keeping, cooking and unfailing ability to keep me smiling in difficult times have kept me going and helped make it possible. Thank you. X

LIST OF TABLES AND FIGURES

Tables

Figures

CHAPTER 1: SYSTEMATIC REVIEW

1.1 Title Page

A systematic review of the evidence for treatment of the psychological sequelae of childhood sexual abuse in adult survivors.

(This has been prepared in accordance with the submission guidelines for Clinical Psychology Review -See Appendix 1)

Short title for running head: Review of treatment for psychological sequelae of CSA

Author: Eimear McKay [1, 2] with second reviewer: Dr Andy Summers[2]

[1] Clinical and Health Psychology, University of Edinburgh, UK

[2] Clinical Psychology Dept, NHS Fife, UK

Word Count (excluding references):9702

1.2 Abstract

Background: Childhood sexual abuse (CSA) has wide-ranging implications for mental health. This review aims to provide an up-to-date examination of the empirical evidence for individual treatments for the mental health problems of CSA survivors.

Method: Ten electronic databases were searched using terms relating to CSA and treatment. Primary authors of the included articles were contacted to request further published or unpublished research. The evidence was systematically reviewed and critically appraised in terms of 20 quality criteria developed from the Scottish Intercollegiate Guidelines Network (SIGN) methodological guidelines and an examination of study outcomes.

Results: Twenty-three papers met the inclusion and exclusion criteria. Five randomised control trials (RCTs) were of a high methodological quality, the remaining RCTs and outcome studies were of a moderate methodological quality. Results are organised and discussed separately for six treatment modalities: Cognitive behavioural therapy (CBT) oriented, mindfulness oriented, interpersonal (IPT) oriented, body oriented, narrative oriented and a final category encompassing a variety of psychotherapeutic approaches.

Conclusion: The majority of the studies were of a moderate or adequate methodological quality. There is robust evidence for the treatment of post-traumatic stress disorder (PTSD) using CBT-oriented approaches, and in particular cognitive processing therapy. In addition, good evidence exists for the use of IPT in treating depression in female survivors of CSA. However, a major limitation of the evidence base is the lack of methodologically robust studies addressing other psychological difficulties often associated with CSA. A number of methodological shortcomings such as small sample size and a lack of information about patient satisfaction exist. Directions for future research are discussed.

Highlights:

- **There has been a huge increase in the number of publications examining treatments for psychological sequelae in the last 11 years.**
- **Although the methodological quality of studies has improved during this time, there are still a number of short-comings which limit the conclusions which can be drawn from the evidence regarding the use of psychological therapies in addressing mental health difficulties following CSA.**
- **In particular, CBT oriented interventions are effective at reducing trauma symptoms and IPT has been shown to be effective in addressing depressive symptoms in this population.**

Keywords: *childhood sexual abuse, treatment, therapy, adult.*

1.3 Introduction

Childhood sexual abuse (CSA) is a wide-ranging societal problem with serious implications for psychological health. Studies have varied in their estimations of the prevalence of childhood sexual abuse, ranging from 20% for woman and between 5 and 10% for men (Finkelhor, 1994). A more recent meta-analysis examining international data suggested from 0% to 55% for women and 0% to 60% for men in certain clinical populations (Pereda, Guilera, Forns, & Gómez-Benito, 2009). The variability in prevalence may be the result of methodological factors such as the definition of CSA used, the types of questions asked and the method of data collection (Pereda, Guilera, Forns, & Gómez-Benito, 2009). A recent prevalence study in the UK suggested a reported prevalence rate of 11.3% (Radford et al., 2011).

It has widely been acknowledged that CSA can have long-term consequences for physical and mental health. Spataro, Mullen, Burgess, Wells, and Moss (2004) conducted a prospective study which demonstrated an association between CSA and the subsequent rates of adult mental health difficulties. In a systematic review of reviews examining the long-term effects of childhood sexual abuse, Manglio (2009) reported on 14 reviews containing 587 outcome studies. Manglio (2009) concluded that childhood sexual abuse is a risk factor for psychopathology, with survivors often experiencing medical, psychological, behavioural and sexual disorders.

In terms of psychological consequences, significant associations have been found between CSA and anxiety, anger, borderline personality disorder, depression, eating disorders, dissociative disorders, impaired self-esteem, interpersonal difficulties, post-traumatic stress disorder (PTSD), suicidal ideation, self-destructive behaviours and sleep disorders (Hillberg, Hamilton-Giachritsis, & Dixon, 2011; Steine et al., 2012).

Furthermore, several reviews have highlighted a significant association between CSA and sexual revictimisation in adulthood (Arriola, Louden, Doldren, & Fortenberry, 2005; Neumann, Houskamp, Pollock, & Briere, 1996; Roodman & Clum, 2001).

Health risk behaviours such as increased substance misuse, risky sexual behaviour and symptoms such as chronic pain result in increased health care utilisation as a consequence of the psychological and physical sequelae of CSA (Finestone et al., 2000, Hulme, 2000). The evidence for a range of psychological sequelae and increased healthcare utilisation resulting from CSA indicate a clear need for evidence-based CSA informed psychological interventions.

In the last 20 years, there have been several narrative systematic reviews (Cahill, Llewelyn & Pearson, 1991; Kessler, White, & Nelson, 2003; Lubin, 2007; Martsolf & Draucker, 2005; Ryan & French, 2003) and four meta-analyses published (Callahan, Price, & Hilsenroth, 2004; de Jong & Gorey, 1996; Price, Hilsenroth, Petretic-Jackson, & Bonge, 2001; Taylor & Harvey, 2010) which examine the treatment outcomes for survivors of childhood sexual abuse. With the exception of Price et al. (2001), the systematic reviews and meta-analyses examine either group therapy or group and individual therapy together.

Price et al. (2001) examined effectiveness and efficacy of relevant studies using Foa and Meadows' (1997) gold standards and Seligman's (1995) standards for efficacy studies, without the use of a systematic numerical grading system. Price et al. (2001) concluded that their findings largely supported the use of individual psychological therapy in the treatment of adult survivors of childhood sexual abuse. This review was published 11 years ago and contained eight studies. In the last 11 years, there has been a huge increase

in the number of publications examining psychotherapy for the mental health problems associated with CSA.

Price et al. (2001) recommended that future studies include efficacy and effectiveness criteria with a thorough description of participants, including participants who reflect the range of complexity in presentation of a trauma population, naturalistic studies, inclusion of reliable and valid measures, manualised therapies and therapies grounded in existing theoretical models. The current review will use a quality checklist adapted from the SIGN guidelines, which utilises many of these criteria to evaluate the evidence base for psychological therapies.

Taylor and Harvey (2010) conducted a meta-analysis of the effects of group and individual psychotherapy with adult survivors of childhood sexual abuse. This quantitative review was designed to overcome some of the flaws of previous meta-analyses of treatment outcomes for survivors, such as inclusion of a small number of studies, lack of sample size correction and pooling effect sizes from independent samples. The meta-analysis improved upon the previous literature base by considering factors which might account for variability in treatment outcome such as characteristics of the samples and abuse-related factors – for example, age at the time of abuse. The results of this meta-analysis support the use of psychotherapy in the treatment of the psychological sequelae of childhood sexual abuse. The current review takes a narrative approach to some of the issues highlighted by Taylor and Harvey's (2010) meta-analysis and examines a number of studies that were either not included in the meta-analysis or were published since 2010 (Edmond & Rubin, 2004; Kimbrough, Magyari, Langenberg, Chesney & Berman 2010; Price, 2006; Resick, Nishith, Weaver, Astin, & Feuer, 2002;

Resick, Nishith, & Griffin, 2003; Steil, Dyer, Priebe, Kleindienst, & Bohus, 2011; Steil, Jung, & Stangier, 2011; Talbot, Chaudron, et al., 2011).

Although there have been several outcome studies and reviews published examining the efficacy of treatments for the effects of CSA, there were a number of reasons which warranted the current systematic review. There has only been one previous narrative systematic review, published 11 years ago, which focuses on individual therapies only, and since this time there has been a huge increase in the number of publications in this area. Since the publication of Taylor and Harvey's (2010) meta-analysis, there have been a number of studies published examining individual therapies in the treatment of CSA. The pace of publication in this area justifies the need for an up-to-date thorough examination of the most recent treatment outcome literature. The primary aims of this narrative systematic review were to appraise the current literature for psychological approaches in the treatment of the psychological sequeale of CSA; examine the range of treatment orientations; explore the methodological rigour of treatment studies addressing the psychological sequelae of CSA and make methodological recommendations for further research in this area. A secondary aim of the review was to examine the range of psychometric measures included in this literature. Finally, actual outcomes have also been reported.

1.4 Method

1.4.1 Study selection: literature searches

In 2009, literature searches of relevant terms (e.g. childhood sexual abuse, therapy, treatment, intervention and outcome in combination and truncated – see Appendix 3) were conducted via the Cochrane Database of Systematic Reviews (CDSR, 1980–2009), the Cochrane Central Register of Controlled Trials (1980–2009), the Cumulative Index to Nursing and Allied Health Literature (CINAHL, 1991–2009), EMBASE (1980–

2009), MEDLINE (1980–2009), the NHS Database of Abstract of Reviews of Effectiveness (NHS DARE, 2005–2009), NHS Evidence (2006–2009), PsychInfo (1980–2009), Pubmed (1980–2009) and Web of Knowledge (WOK, 2001–2009). Reference lists of located articles were also reviewed.

To ensure the review was as current as possible, these searches were repeated in February 2012. This produced four additional papers which met the inclusion criteria. The reference lists of all articles meeting the inclusion criteria were also reviewed. The searches were performed twice and RefWorks was used to store all references of the articles identified. All search results were coded in a spreadsheet and duplicates were removed following the completion of all searches.

To counter any risk of publication bias, 14 authors were emailed to request details of any unpublished studies which may also meet the inclusion criteria of the systematic review. Six authors responded; however, there were no further papers which met the inclusion criteria.

Three papers were identified which examined an intervention in an abuse population consisting of a sample of survivors of CSA within a larger trauma sample; however, these studies did not provide specific data for the CSA sample (Cloitre, Koenan, Cohen, & Han., 2002; Echeburua, De Corral, Zubizarreta, & Sarasua, 1997; Paivio & Nieuwenhuis, 2001). The authors of these three papers were contacted and asked to provide data specifically for the CSA samples included in the study, if available. To date, only one of these authors responded to the requests for further information about the CSA population; the papers did not meet the inclusion criteria and have been excluded.

1.4.2 Study selection: inclusion criteria

For inclusion, studies were required to provide quantitative data on the outcome of therapeutic individual interventions, and a description of the intervention. Case studies and studies which employed a group intervention without data on a one-to-one therapeutic intervention were excluded. Studies which included adult survivors of childhood sexual abuse as part of a larger trauma sample, but did not report results for the CSA group separately were excluded. These studies did not allow conclusions to be drawn explicitly for the effectiveness of interventions aimed at addressing the psychological sequelae of childhood sexual abuse in adulthood. Studies which employed a qualitative methodology were also excluded.

1.4.3 Outcome of the literature search

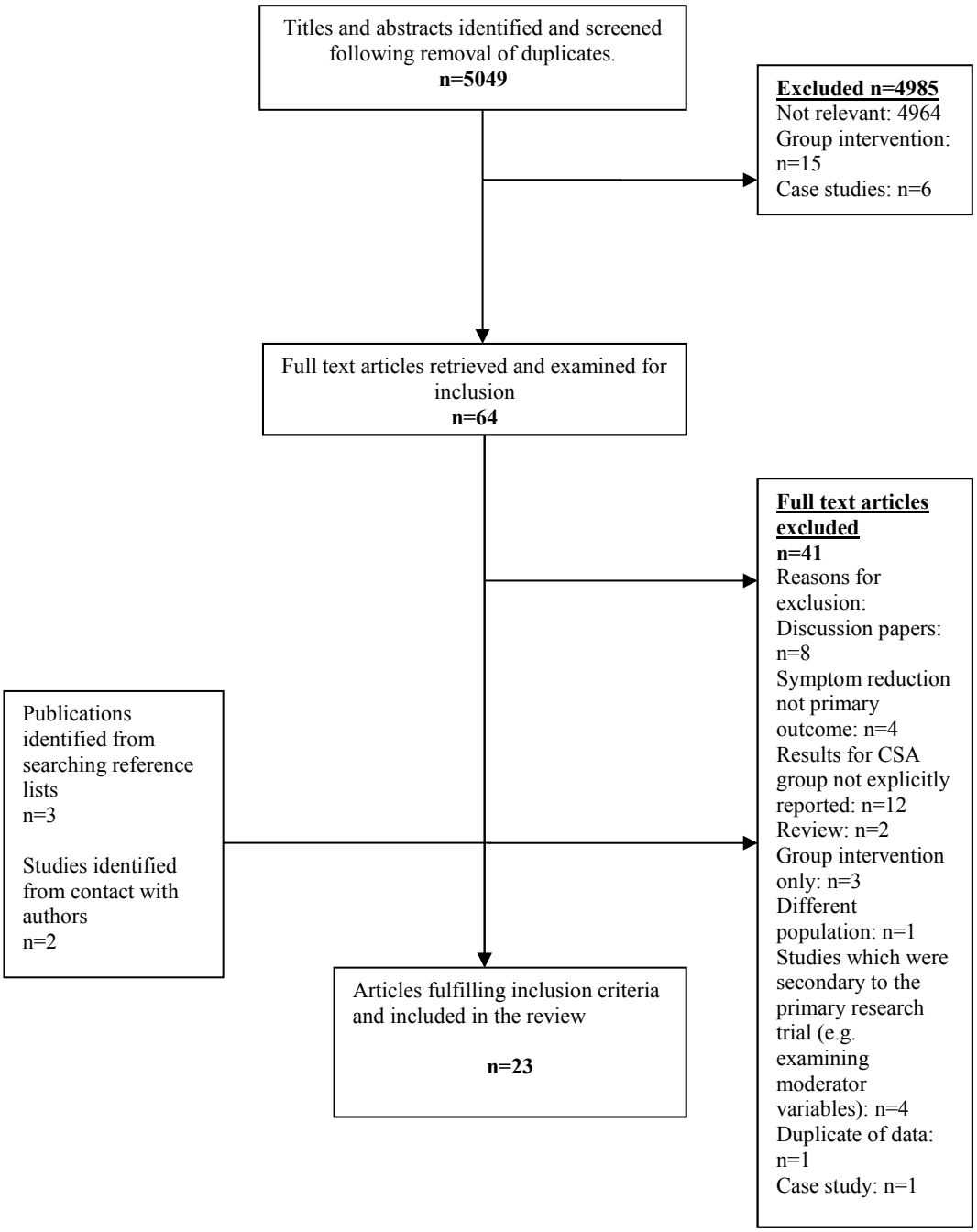


Figure 1: Systematic Review-Flow chart of the study selection process.

1.4.4 Assessing methodological quality

The Cochrane Collaboration recommends that reviewers formally assess the quality of trials for inclusion in systematic reviews using explicit methodology (Higgins & Green, 2011). A variety of methodological approaches exist for examining study quality and appropriateness for inclusion (Deschartres, Charles, Hopewell, Ravaud, &Altman, 2011; Guyatt, et al., 2011). For the purpose of this review, studies meeting the inclusion criteria were examined using the SIGN methodology checklist for randomised controlled trials, as these provide a systematic way of evaluating outcome studies. As recommended by SIGN, these guidelines were adapted for reviewing the non-randomised controlled trials by excluding Questions 1.2, 1.3 and 1.4 from the checklist. For outcome studies which did not have a control group, Criteria 1.5 and 1.6 were also excluded. The primary author and second reviewer (who independently assessed 17 of the 23 papers) used these internal validity criteria, with the addition of a criterion examining the definition of CSA, to provide an indication of construct validity, and noting if power and effect size had been reported.

Tables 1 and 2 provide details of all the methodological quality indicators examined and the outcome for each paper. A three point scoring system was applied to the criteria (condition fully met=2; condition partially met=1; condition not met=0) with higher scores indicating higher methodological quality. The scores were totalled and then averaged to provide a final grading between 0 and 2. Scores over 0.5 were given a grading of 1 (acceptable/moderate quality) and scores over 1.5 were given a 2 (good/high quality). In line with SIGN guidelines, papers which were non-randomised control studies or did not have a control group could not score above a "1". Inter-rater reliability for the raters was calculated, Kappa = 0.86 ($p < 0.0005$). This kappa value is

considered excellent (Landis & Koch, 1977). Any disagreements between reviewers were resolved by consensus (See Table 3).

Table 1: Methodological quality indicators: randomised trials (Note: 2=condition fully met: 1=condition partially met, 0=condition not met – unclear/insufficient/missing information).

Methodological Quality Indicators	Batten et al. (2002)	Chard (2005)	Edmond et al. (1999)	Freedman and Enright (1996)	McDonagh et al. (2005)	Owens, Pike and Chard (2001)	Resick et al. (2002, 2003)[1]	Resick et al. (2008)	Ryan et al. (2005)	Talbot et al. (2011)
1.1 Appropriate & clearly focused question	**2**	**2**	**2**	**2**	**2**	**1**	**2**	**2**	**2**	**2**
1.2 Randomised assignment	**1**	**2**	**2**	**1**	**2**	**2**	**2**	**2**	**0**	**2**
1.3 Adequate concealment	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**0**
1.4 Subjects and investigators "blind" to treatment allocation	**1**	**2**	**2**	**0**	**1**	**0**	**2**	**2**	**1**	**0**
1.5 Treatment and control groups are similar at the start of the trial	**2**	**2**	**2**	**2**	**2**	**1**	**2**	**1**	**1**	**2**
1.6 Only difference between groups is the treatment under investigation	**2**	**2**	**2**	**1**	**2**	**1**	**2**	**2**	**1**	**2**
1.7 Relevant outcomes are measured in a standard, valid and reliable way	**2**	**2**	**2**	**1**	**2**	**2**	**2**	**2**	**2**	**2**
1.8 Intention to treat analysis	**0**	**2**	**0**	**0**	**2**	**0**	**2**	**2**	**0**	**2**
1.9 Results are comparable for all sites	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
1.10 How well was the study done to minimise bias?	**1**	**2**	**1**	**1**	**1**	**1**	**2**	**2**	**1**	**0**
1.11 Power reported?	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**2**	**2**
1.12 Effect size reported?	**1**	**2**	**2**	**0**	**2**	**0**	**2**	**2**	**0**	**2**
1.13 Is the overall effect due to the study intervention?	**1**	**2**	**2**	**1**	**2**	**1**	**2**	**1**	**1**	**0**
1.14 Are the goals of treatment made explicit?	**1**	**2**	**2**	**2**	**1**	**2**	**2**	**2**	**2**	**2**
1.15 Are results directly applicable to the patient group targeted?	**1**	**2**	**2**	**1**	**1**	**1**	**2**	**2**	**2**	**2**
1.16 Definition of childhood sexual abuse?	**2**	**2**	**1**	**1**	**2**	**2**	**2**	**0**	**2**	**2**
1.17 Treatment adequately defined	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**	**2**
1.18 Validity of outcome measures discussed	**2**	**2**	**2**	**1**	**2**	**2**	**2**	**2**	**0**	**0**
1.19 Clear results	**2**	**2**	**2**	**1**	**2**	**2**	**2**	**2**	**1**	**2**
1.20 Recommendations made are based on findings	**1**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Quality score	**1**	**2**	**2**	**1**	**2**	**1**	**2**	**2**	**1**	**1**

[1] Resick et al. (2002) and (2003) were combined for methodological review because both publications examined the same data set; however, Resick et al. (2003) provided the information specific to the CSA sample.

Table 2: Methodological quality indicators: outcome studies (non-randomised control group studies and single group designs; Note: 2=condition fully met: 1=condition partially met, 0=condition not met – unclear/insufficient/missing information)

Methodological Quality Indicators	Clarke and Llewelyn (1994)	Edmond and Rubin (2004)	Kimbrough et al. (2010)	MacIntosh and Johnson (2008)	Price, J.(2004)	Price, C. (2006)	Price, C. (2005)	Price, C. (2007)	Romano and De Luca (2005)	Smith et al. (1995)	Steil, Dyer, Priebe, Kleindienst and Bohus (2011)	Steil, Jung, and Stangier (2011)	Talbot et al. (2005)
1.1 Appropriate & clearly focused question	1	2	2	1	2	2	2	1	2	2	2	2	2
1.5 Treatment and control groups are similar at the start of the trial	0	1	0	0	0	2	2	2	0	0	0	0	0
1.6 Only difference between groups is the treatment under investigation	0	0	0	0	0	2	1	2	1	0	0	0	0
1.7 Relevant outcomes are measured in a standard, valid and reliable way	2	2	2	1	2	2	2	2	1	2	2	1	2
1.8 Intention to treat analysis	0	0	2	0	0	0	0	0	0	0	0	0	0
1.9 Results are comparable for all sites	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1.10 How well was the study done to minimise bias?	1	1	0	0	1	2	0	1	0	0	0	0	1
1.11 Power reported	0	2	2	0	0	0	0	0	0	0	0	0	0
1.12 Effect size reported	0	0	2	0	2	0	0	0	2	0	2	2	0
1.13 Is the overall effect due to the study intervention?	1	1	1	1	1	2	1	1	1	1	1	1	0
1.14 Are the goals of treatment made explicit?	1	1	2	2	2	2	1	1	2	1	2	2	2
1.15 Are the results directly applicable to the patient group targeted?	1	1	2	1	2	2	1	1	1	1	2	2	2
1.16 Definition of childhood sexual abuse?	1	1	0	1	2	1	1	1	2	0	2	2	2
1.17 Treatment adequately defined	2	2	2	1	2	2	2	2	2	1	2	2	2
1.18 Validity of outcome measures discussed	0	2	2	2	2	2	2	2	2	0	1	2	0
1.19 Clear results	1	1	2	1	2	2	1	2	2	1	2	2	1
1.20 Recommendations made are based on findings	1	1	2	2	2	2	2	2	2	2	2	2	2
Quality score	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**

Table 3: Quality of studies included in systematic review.

Study	Rater 1 (Overall Rating)	Rater 2 (Overall Rating)	Final Agreement
Batten, Follette, Hall and Palm (2002)	1	n/a	n/a
Chard (2005)	2	2	2
Clarke and Llewelyn (1994)	1	n/a	n/a
Edmond, Rubin and Wambach (1999)	2	2	2
Edmond and Rubin (2004)	1	1	1
Freedman and Enright (1996)	1	1	1
Kimbrough, Magyari, Langenberg, Chesney, et al.,(2010)	1	1	1
McDonagh et al., (2005)	2	2	2
McIntosh and Johnson (2008)	1	1	1
Owens, Pike and Chard (2001)	1	1	1
Price, Hilesenroth, Callahan, Petretic-Jackson, et al., (2004)	1	n/a	n/a
Price, (2005)	1	1	1
Price, (2006)	1	n/a	n/a
Price, (2007)	1	n/a	n/a
Resick and Nishith, et al. (2002; 2003)	2	n/a	n/a
Resick et al. (2008)	2	2	2
Romano and De Luca (2005)	1	1	1
Ryan, Nitsun, Gilbert and Mason (2005)	1	1	1
Smith, Pearce, Pringle and Caplan (1995)	1	n/a	n/a
Steil, Dyer, Priebe, Kleindienst and Bohus (2011)	1	1	1
Steil, Jung, and Stangier (2011)	1	1	1
Talbot et al. (2005)	1	1	1
Talbot et al. (2011)	2	1	1

1.5 Findings

1.5.1 Study design

Ten of the total 23 studies included in this review are randomised trials. The remaining 13 studies are controlled trials and repeated measures outcome studies; one of which was an 18-month follow-up study of an included RCT. It was hoped that the inclusion of this study would provide a richer understanding of the evidence-base for psychological therapies in the longer term. Details of the study designs are outlined in Table 4. Where studies described treatment as usual this was considered to be an intervention. Waiting list or minimal attention groups were considered controls.

Aside from waiting lists or minimal attention controls, 18 different forms of intervention were examined in the studies. Nine studies examined cognitive behavioural therapy (CBT) oriented interventions (Chard, 2005; Edmond et al., 1999; Edmond & Rubin, 2004; McDonagh et al., 2005; Owens, Pike & Chard, 2001; Resick et al., 2002; Resick et al., 2003; Resick et al., 2008; Steil, et al., 2011). Two studies examined mindfulness oriented interventions (Kimbrough et al., 2010; Steil et al., 2011), interpersonal therapy (IPT) oriented interventions (Talbot et al., 2005; Talbot et al., 2011) and body-oriented interventions (Price, 2005; Price, 2006). The remaining seven studies examined a range of other therapies including narrative therapy (Batten, Follette, Rasmussen-Hall & Palm, 2002), cognitive analytic therapy (CAT; Clarke & Llewelyn, 1994), forgiveness therapy (Freedman & Enright, 1996) emotionally focused couple therapy (McIntosh & Johnston, 2008), short individual psychodynamic psychotherapy (SIPP; Price et al., 2004) short-term focal integrative therapy (Ryan, Nitsun, Gilbert & Mason, 2005) and long-term individual therapy (Smith, Pearce, Pringle & Caplan, 1995).

Six of the eight RCT's included in this review compare CBT-oriented interventions to routine care, wait-list controls, present-centred therapy, prolonged exposure or written

accounts. These are explored in more detail in section '1.55 Treatment outcomes'. The remaining RCT compares IPT to usual care psychotherapy. Although participants were randomised, in McDonagh et al., 2005 study of CBT, participants had an increased likelihood of being randomised to the CBT experimental group due to attrition.

Two studies use quasi-randomised designs. Freedman and Enright (1996) employed a yoked randomised experimental and control group whereby pairs of participants were matched on a series of variables and then one from each pair was randomly selected to be in the experimental group. Ryan et al., (2005) employed a patient preference design whereby individuals were randomly allocated to waiting list or the treatment modality they preferred. The limitations of these quasi randomised designs have been acknowledged in the quality scores the papers have received (See Table 1).

1.5.2 Study characteristics

The main characteristics of the 23 studies included in this review are contained in a summary table (See Table 4).

Patient selection

In all of the studies patients were either referred by healthcare practitioners or they responded to advertisements in the local press. These methods of recruitment may result in self-selection bias and nonprobabilty sampling. The majority of the studies included only adult female survivors of childhood sexual abuse; only four studies examined treatment in male survivors.

Cultural setting& recruitment

There is a lack of diversity apparent with regard to research setting. Almost all of the studies recruited populations from the community. Furthermore, seventeen studies were conducted in the USA, three studies were conducted in the UK, two studies were set in

Germany and one study was carried out in Canada. This limits the generalisabilty of outcomes to non-Western populations.

Sample size

There were a total of 1,018 participants across all of the studies. The average age of participants was 36.3 years old. The largest sample sizes were recruited to randomised controlled trials with smaller sample sizes, with as few as eight individuals apparent in repeated measures designs.

Definition of abuse

With the exception of Resick et al., (2008), all the included randomised trials included a definition of childhood sexual abuse. Those who used a standardised questionnaire or where the definition was based on state law were rated higher than studies in which the authors generated their own definition. Two of the repeated measures outcome studies did not provide a definition of childhood sexual abuse basing recruitment on self-reported CSA without any specified criteria (Kimbrough et al., 2010; Smith et al., 1995).

Intention to treat analysis

Intention to treat analyses were conducted in seven of the studies. All of the studies which examined CBT-oriented interventions with the exception of Edmond et al., (1999) and Edmond & Rubin (2004) used intention to treat analyses.

1.5.3 Methodological quality of included studies

Table 1 and 2 provided ratings for each of the studies based on the quality criteria developed for this purpose. As there was a mixture of randomised control trials, controlled trials and repeated measures outcome studies, the criteria do not provide an

exact comparative measure across all of the studies. The criteria do, however, provide some indication of the methodological merit of the studies included. In keeping with the SIGN guidelines, those studies which did not have a randomised control design could not score above a 1. Seventeen studies included in the review provided information on the validity and reliability of the primary outcome measures. However, there was large variability in terms of the type of psychometric tests used for specific psychological sequelae; for example, 12 different psychometric measures were used to examine trauma or post-traumatic stress symptoms (See Appendix 4). The majority of measures used in the studies were reported as being valid and reliable. These are discussed later in the article.

Twenty studies provided good descriptions of the relevant interventions and three studies provided an adequate description. Eight different forms of therapy were guided by a manual.

The results of the methodological review suggest that Chard (2005), McDonagh et al. (2005), Edmond et al., (1999), Resick et al., (2003) and Resick et al. (2008) published the methodologically strongest studies. These findings are discussed further in section 1.5.5 of this article. In studies which included follow-up data, attrition at follow-up was low with the exception of the McDonagh et al., 2005 study. Particular strengths of these studies include random assignment, adequate concealment and reporting of power and effect size calculations.

Table 4: Summary of study characteristics

Study Country Setting		Design	Intervention	Sample Gender/Abuse/Mean age	Construct/Psychological sequelae examined	Outcome	Effect size* (Cohen's d)
1.	Batten et al., (2002) USA Community	Randomised trial	Written disclosure (about CSA or time management for the control group)	Female CSA survivors M age:35	Treat CSA – effect on physical and psychological health	CSA group's psychological distress and depressive symptoms remained similar over the course of the study. The control groups symptoms decreased.	BDI (*d*= 0.53) GSI (*d*=2.68)
2.	Chard (2005) USA Community	RCT Assessed pre-treatment, immediately post-treatment, 3 months and 1 year follow-up	CPT for CSA survivors	Female CSA survivors M age:33	PTSD related to CSA	Treatment group showed significantly greater improvement than MA WL control group on the CAPS-SX, MPSS, BDI-II, and DES-II. Large effect sizes evidenced at post-treatment assessment. Continued improvement at 3 months and gains maintained at one year.	At post-treatment without controlling for pre-treatment scores: CAPS-SX (*d*=1.52) MPSS (*d* =1.55) BDI-II (*d* =1.42) DES-II (*d* =.91) After controlling for pretreatment scores, large effect sizes were reported in the publication.
3.	Clarke and Llewelyn (1994) UK Community	Repeated measures Pre-, post-therapy and three month follow-up	Cognitive analytic therapy	Female CSA M age:27	Relationship problems Revictimisation	Some improvement although levels of distress remained high.	Insufficient data
4.	Edmond et al. (1999) USA Community	RCT Pre-, post-treatment and 3 month follow-up	EMDR versus routine therapy	Female CSA survivors M age: 35	Trauma symptoms	EMDR ppt scored significantly better on all measures post-treatment than controls. EMDR was also more effect than routine therapy at maintaining therapeutic gains. No significant differences between EMDR and routine therapy on any of the standardised measures.	BDI (*d*=1.29) STAI (*d*=1.02) IES (*d*=.56) BI (*d*=.63) EMDR produced a composite ES of (*d*=1.08) at follow-up
5.	Edmond and Rubin (2004) USA Community	Follow-up study to Edmond et al. (1999).	18 month follow-up of EMDR versus routine therapy	Female CSA survivors M age: 36	Trauma Symptoms	Results for EMDR group maintained at 18 month follow-up but was non-signficant.	Non significant findings & insufficient data
6.	Freedman and Enright (1996) USA	Independent samples Yoked randomised experimental and control group design	Long-term forgiveness therapy Manualised	Female CSA M age: 36	Psychological health/well-being	Significant decreases in depression and anxiety compared with the control group, and increases in forgiveness and hope.	Post test 1 Effect sizes: Psychological Profile of Forgiveness Scale (*d*=2.56) ANX(*d*=2.68) State Anxiety subscale (*d*=2.61) Trait Anxiety subscale(*d*=2.2) BDI (*d*=1.32) Self-esteem scale(*d*=1.47) Hope scale (*d*=2.27)
7.	Kimbrough et al. (2010) USA Community	Repeated measures Pilot study	Mindfulness	Female (89.9%) and male. M age: 45 CSA	Depression, PTSD, anxiety	At 8 weeks, depressive symptoms were reduced by 65%. Statistical significant improvements were observed in all outcomes post-MBSR . Improvements were for the most part sustained at 24 weeks.	BDI-II (*d*=1.8 at 8 weeks, *d*=1.0 at 24 weeks) BSI (*d*=1.1 at 8 weeks, *d*=0.8 at 24 weeks) MAAS (*d*=1.2 at 8 weeks, *d*=1.0 at 24 weeks) PCL-C (*d*= 1.2 at 8 weeks, *d*=0.8 at 24 weeks) PCL-C Avoidance subscale (*d*=1.4 at 8 weeks, *d*=0.9 at 24 weeks) PCL-C Re-experiencing subscale (*d*=0.7 at 8 weeks, *d*=0.7 at 24 weeks) PCL-C Hyperarousal subscale (*d*=1.2 at 8 weeks, *d*=0.6 at 24 weeks)

Study Country Setting		Design	Intervention	Sample Gender/Abuse/Mean age	Construct/Psychological sequelae examined	Outcome	Effect size* (Cohen's d)
8.	McDonagh et al. (2005) USA Community	RCT	CBT compared with PCT and WL control	Female CSA M age: 40	PTSD related to CSA	CBT and PCT superior to WL in decreasing PTSD symptoms and secondary measures.	CAPS severity score: Follow-up CBT vs. PCT sizes (*d*=0.61) in favour of CBT CBT vs. PCT vs. WL (ITT sample) at post-test effect sizes ranged from medium (*d*= 0.50) to large (*d*=0.89 –1.07). Both active treatments were superior to the waiting list.
9.	McIntosh and Johnson (2008) USA Community	Repeated measures	Emotionally focused couple therapy	Couples M age: 41 (All CSA victims were female)	Relationship difficulties and CSA related symptoms	Half the couples reported clinically significant improvements in mean relationship satisfaction. In two of the couples, the male partners became increasingly emotionally abusive over the course of therapy.	Insufficient data
10.	Owens, Pike and Chard (2001) USA Community	Repeated measures	CPT–SA (group and individual) Minimal attention control group	Females M age: 33	Treat cognitive distortions and CSA related symptoms	After treatment participants demonstrated significant improvement in cognitive distortions on the PBRS and WAS, compared with minimal attention group.	PBRS subscales: Undoing (*d*=.95) Self blame (*d*=.92) Safety (*d*=1.68) Trust (*d*=1.87) Power (*d*=1.34) Esteem (*d*=2.11) Inimacy (*d*=1.9.) WAS- Benevolence of the world (*d*=1.11) WAS-self worth (*d*=1.06)
11.	Price, J. (2004) USA Community	Repeated measures	SIPP	Female (75%) and Male (25%) CSA M Age: 34	CSA related symptoms	Significant improvement in symptomatic distress, functioning and dynamic personality variables. Large effect sizes.	GSI (*d*=.83) DEP (*d*= 0.98) I-S (*d*=0.84) ANX (*d*=0.66) SAS-G (*d*=0.75) GAF (*d*=1.51) GARF (*d*=1.74) SOFAS (*d*=0.86)
12.	Price, C. (2005) USA Community	Repeated measures 6 time points: baseline, 2 times during intervention, post-intervention, 1 month and 3 month follow-up	Body Oriented therapy Vs. massage	Female M age: 41 CSA	Psychological well-being, physical well-being, body connection	Significant improvements on all measures for both groups. No statistically significant differences between groups.	GSI (post intervention *d*=0.1, 1 month follow-up *d*=0.03, 3 month follow-up *d*=0.03) CR-PTSD (post intervention *d*=0.07, 1 month follow-up *d*=0.02, 3 month follow-up *d*=0.01) DES (post intervention *d*=0.24, 1 month follow-up *d*=0.2, 3 month follow-up *d*=0.18)
13.	Price, C. (2006) USA Community	2 group randomised Pilot	Body oriented therapy Wait-list control group 8 x 1 hour sessions	Female CSA	CSA, psychological symptoms	Significant improvements in psychological symptoms, PTSD, total number of physical symptoms and physical discomfort for body oriented therapy group.	Insufficient data
14.	Resick and Nishith et al. (2002) USA Community	RCT	CPT Prolonged exposure Wait-list control	Female CSA (41%) n=47 Non-CSA n=74	Complex PTSD	Both groups improved significantly on measures of PTSD, depression and symptoms of complex trauma, regardless of CSA. Both treatments were equally effective. Improvements were maintained for 9 months.	Large effect sizes reported in the publication for all (TSI, CAPS and BDI) subscales with the exception of the impaired self-reference scale which demonstrated a medium effect size for the CSA group.

Study Country Setting		Design	Intervention	Sample Gender/Abuse/Mean age	Construct/Psychological sequelae examined	Outcome	Effect size* (Cohen's d)
15.	Resick, Nishith and Griffin (2003) USA Community	Dismantling study examining the differences between CSA group and adult female rape victims in the above RCT.	CPT Prolonged exposure Wait-list control	CSA (41%) n=47 Non-CSA n=74	Complex PTSD	Small differences in effect size between PE and CPT groups in favour of CPT.	Large effect sizes reported in the publication for all (TSI, CAPS and BDI) subscales with the exception of the impaired self-reference scale which demonstrated a medium effect size for the CSA group.
16.	Resick et al., (2008) USA Community	Dismantling study RCT	CPT versus CPT cognitive therapy only vs. written accounts	Female 78% CSA M age: 35	PTSD Co-morbid problems	Improvements on PTSD and depression, for all 3 treatments. CPT-C condition reported greater improvement in PTSD than the WA condition.	Large effect sizes over time for the ITT and completer samples, Medium effect sizes for the partially treated samples, and small ESs for those who only participated in assessments but attended no therapy
17.	Romano and De Luca (2005) Canada Community	Repeated measures Pre-, post-, 1 and 6 months.	Individual treatment focusing on self-blame, anger and anxiety. CBT based Manualised	Male CSA M age: not reported	Self-blame Anger Anxiety	Treatment decreased behavioural self-blame, anger and anxiety. These improvements were maintained 6 months post-treatment. No impact on characterological self-blame.	Effect sizes calculated with available data for each participant: Anger (*d*= − 0.77) Anxiety (*d* =− 0.64, d=-1.32)
18.	Ryan et al. (2005) UK Community	Randomised Pre-, post-, 4 and 8 month follow-up	Short-term focal integrative therapy Individual and group (patient preference) vs. Wait-list control 12 session weekly intervention	Female CSA age range: 21–61	CSA related symptoms	Statistically and clinically significant positive treatment effect for individual and group treatment. No significant differences between individual and group treatments	Insufficient data
19.	Smith et al. (1995) UK	Repeated measures	Long-term individual therapy with additional support	Male (16%) Female (84%) CSA M age: not reported	CSA	Significant improvement on scores on measures. Scores were highly significant for those who completed therapy.	Insufficient data
20.	Steil, Dyer et al. (2011) Germany Inpatient	Single group design Pre-, post-, 6 weeks and 3 months.	DBT for PTSD	Female M age: 35.4	Chronic CSA related PTSD	Large effects shown for the PDS. Medium to large effects for other measures. Significant reduction over time for PDS scores.	PDS (*d*=1.22) BDI (*d*=1.04) GSI (*d*=0.36) Trait Anxiety (*d*=0.61)
21.	Steil, Jung et al., (2011) Germany Community	Single group design Pre-, post- and 6 wks after treatment	2 session program of cognitive restructuring and imagery modification	Female M age: 43.78	Fear of being contaminated (FBC)	CRIM has the potential to reduce the FBC and PTSD symptoms. ,	Pretreatment to post-treatment Intensity of the FBC (*d*=.79 ns) Vividness of the FBC (*d*=.831) Uncontrollability of the FBC (*d*=1.11) Related distress (*d*=1.14) PDS (*d*=.75) Pre-treatment to follow-up Intensity of the FBC (*d*=2.23) Vividness of the FBC (*d*=1.83) Uncontrollability of the FBC (*d*=2.79) Related distress (*d*=2.45) PDS (*d*=.99
22.	Talbot et al. (2005) USA Community	Repeated measures Pilot study Baseline, 10 weeks, 24 weeks, 36 weeks	IPT	Female CSA & Depressive disorders M age: 31	Depression	Significant improvements in depression based on HRDS and BDI scores and psychological functioning improved on the SF-36 measure but not social functioning as measured by the SAS-SR.	HRSD (*d*=1.49) BDI-II (*d*=1.07) MOS SF-36 Mental Health component (*d*=1.44)

Study Country Setting		Design	Intervention	Sample Gender/Abuse/Mean age	Construct/Psychological sequelae examined	Outcome	Effect size* (Cohen's d)
23.	Talbot et al. (2011) USA Community	RCT Baseline, 10 weeks, 24 weeks, 36 weeks	IPT vs. usual care psychotherapy	Female M age: 36	Depression PTSD and shame also assessed	Small to large effect sizes IPT group had greater reductions in HRDS, BDI-II, PTSD symptoms and shame.	HRSD (*d*=0.34) BDI-II (*d*=0.29) Modified PTSD Symptom Severity Scale (*d*=0.76) Differential Emotions Scale- shame subscale (*d*=0.38) SAS (*d*=0.06) MOS SF-36 Mental Health component ((*d*=0.22))

Table 4 Abbreviations: MA= minimal attention, WL= waitlist, CPT= Cognitive Processing therapy, CBT= Cognitive Behavioural therapy, EMDR= Eye Movement Desensitisation Reprocessing, MBSR= Mindfulness Based Stress Reduction, PCT=Present Centred therapy, DBT=Dialectical Behavioural therapy, IPT= Interpersonal Psychotherapy, SIPP=Short Individual Psychodynamic Psychotherapy, PE=Prolonged Exposure, CPT-C= Cognitive therapy only, WA=written accounts, CAPS-SX=Clinician Administered PTSD Scale, MPSS=, Modified PTSD Symptom Scale, BDI= Beck Depression Inventory, DES II= Dissociative experiences Scale II, PBRS= Personal Beliefs and Reactions Scale, WAS= World Assumptions Scale, HRDS= Hamilton Rating Scale for Depression, MOS SF-36= Medical Outcome Survey-36, SAS-SR=Social Adjustment Scale-Self-report, GSI= Global Severity Index of the SCL-90, SCL-90-R= Symptom Checklist -90-Revised, BSI=Brief Symptom Inventory, MAAS= Mindful Attention Awareness Scale, PCL-C =PTSD Checklist-Civilian Version, DEP=Depression measure, ANX=Anxiety measure, I-S=Interpersonal Sensitivity Scale, SAS-G=Social Assessment Scale Global Score, GARF=Global Assessment of Relational Functioning Scale, SOFAS=Social and Occupational Functioning Assessment Scale, CR-PTSD=Crime Related PTSD, PDS=Post-traumatic Diagnostic Scale, PBRS=Personal Beliefs and Reactions Scale, WAS=World Assumptions Scale, HRDS= Hamilton Rating Scale for Depression, SF-36= Medical Outcome Survey-36, SAS-SR=Social Adjustment Scale-Self-report.

*Effect sizes: *d*=≥ .20 small effect size, *d*=≥ .50 medium effect size, *d*=≥ .80 large effect size.

1.5.4 Treatment examined

Table 5 outlines the various treatments examined in the outcome studies; broadly, these treatments fall into six modalities. It is acknowledged that this categorisation is arbitrary and some treatments could fall into more than one category.

Table 5: Treatment orientation, intervention and dosage.

Orientation	**Intervention**	**Dosage**
	Cognitive Processing Therapy (CPT)[a]	17 weeks group & individual therapy (90 minute group x 17 and 60 minute individual session x 10). Daily homework also given.
	Eye Movement Desensitisation and Reprocessing (EMDR)	6 x 90 minute sessions.
	Cognitive Behaviour Therapy (CBT)[a]	14 sessions (7 x 2hr long and 7 x 1.5 hrs long).
	Cognitive restructuring and imagery modification (CRIM)	2 sessions (Treatment session lasting on average 89.9 minutes & booster sessions lasting on average 56.89 minutes). Daily homework.
	Present-centred therapy (PCT)[a]	14 sessions (7 x 2hr long and 7 x 1.5 hrs long).
	Prolonged Exposure (PE)	13 hours over 9 sessions.
Mindfulness oriented interventions	Mindfulness [a]	8 weekly, 2.5–3 hour classes and a 5 hour silent retreat. Home practice for 20–30 minutes per day, 6 days per week for 7 weeks.
	Dialectical Behaviour Therapy (DBT)	(Residential) Two weekly 35 minute sessions of individual treatment and weekly group treatments: 90 minutes of skills training, 60 minutes of group focusing on self-esteem, three 25 minute mindfulness sessions and 60 minutes of PTSD-specific psychoeducation. Mean treatment length=82 days.
Other psychotherapeutic interventions	Individual Short-term Psychodynamic Psychotherapy (STPP)[a]	Mean treatment length 26 weeks over a 6 month period. Treatment duration variable based on clinician judgement.
	Emotion focused therapy for couples	Average of 19 sessions.
	Forgiveness therapy [a]	60 minute weekly sessions. Average length of intervention was 14.3 months. Treatment duration variable based on clinician judgement.
	Cognitive Analytic Therapy	Weekly sessions for 16 weeks.
	Humanistic psychotherapy (Breakfree)	30–120 mins, once or twice a week for a variable length of time.
	Short-term focal integrative therapy	12 weekly sessions.
Narrative oriented interventions	Written disclosure	20 minutes on four consecutive days.
Interpersonal oriented interventions	Interpersonal Therapy[a]	16 sessions within 36 weeks (twice as many sessions as control participants).
Body oriented therapies	Body oriented therapy[a]	8 x 60 min weekly sessions.
	Massage	8 x 60min weekly sessions.

[a]manualised therapy

1.5.5 Treatment Outcomes

Cognitive behavioural oriented therapies

Cognitive behavioural therapies tend to use present focused therapeutic techniques to address the relationship between thoughts, feelings and behaviours. Six of the RCTs included in this review are of a cognitive behavioural orientation. Furthermore, five of the seven RCTs and outcome studies examining treatments of a cognitive behavioural orientation targeted post-traumatic stress disorder (PTSD) symptoms primarily. The treatments build on the established evidence-base for cognitive behavioural therapy in treating PTSD (Foa & Meadows, 1997; Foa, Keane, & Friedman, 2000). The interventions examined in RCTs included Cognitive Processing Therapy (CPT), Eye Movement Desensitisation Reprocessing (EMDR) and CBT. EMDR was included in the cognitive behavioural oriented modality due to the exposure component which is often associated with CBT. All of these treatments were found to be superior to a wait-list (WL) control. Of the remaining three studies, the psychological sequelae addressed included: fear of being contaminated (Steil et al., 2011) and trauma symptoms irrespective of PTSD diagnosis (Edmond et al., 1999; Edmond & Rubin, 2004). CBT oriented interventions in these studies were also found to be effective.

Studies targeting PTSD

A total of four of the cognitive behavioural oriented therapies targeted PTSD symptoms primarily. Chard (2005) conducted a RCT examining Cognitive Processing Therapy (CPT) specifically adapted for individuals who have experienced childhood sexual abuse (CPT-SA). Analyses of the data appeared thorough; group differences were assessed prior to outcome analyses and intention-to-treat analyses were conducted using the last observation carried forward to account for drop-out. A 17-week programme of CPT-

SA resulted in significant improvements on PTSD symptoms, depression and dissociation with large effect sizes. These improvements continued until the three month follow-up and were still maintained at the one year follow-up. However, individuals who dropped out of the study had significantly higher PTSD scores, casting some doubt on the effectiveness of this treatment for individuals with severe PTSD. The author reported lower levels of attrition than similar studies with a loss of eight participants at three month follow-up and nine participants at one year follow-up (Cloitre et al., 2002; Resick et al., 2002). A further strength of this study is that therapist adherence to the intervention was independently rated.

A previous study with a smaller sample size also found support for manualised CPT-SA in treating cognitive distortions, compared with minimal attention wait-list participants (Owens et al., 2001). The results were significant with only two of the treatment group (n=28) still meeting the criteria for PTSD compared to all of the minimal attention participants (n=25). Bonferroni correction was applied to analyses ensuring the criteria for significance was conservative, thereby controlling for Type 1 error. Resick et al. (2002) compared Prolonged Exposure (PE) with CPT in a methodologically robust study. Firm conclusions can be drawn about the efficacy of PE and CPT, which were both superior to WL controls in a trauma sample consisting of female rape survivors, of whom 41% had experienced childhood sexual abuse. There were no statistical differences between CPT and PE on PTSD measures, but CPT showed superiority on two out of four measures of guilt.

This study was followed up by further analysis examining childhood sexual abuse survivors within the trial (Resick et al., 2003). When the sample was divided into a non-CSA group of adult rape survivors, and a group who had experienced CSA as well as adult rape, there were no differences between the groups on the Clinician Administered

PTSD Scale (CAPS) or Beck Depression Inventory (BDI) pre-treatment, but the CSA group scored higher on the Trauma Symptom Inventory (TSI). Both groups improved post-treatment and maintained these gains at nine months. The CSA group appeared to have a more complex presentation because they also scored higher on the TSI post-treatment, nonetheless they still benefited from PE and CPT. Results of all three of these studies can only be generalised to community samples of women (Chard, 2005; Owens et al., 2001; Resick et al., 2002).

McDonagh et al. (2005) conducted an RCT examining CBT compared with a problem-solving therapy named Present-Centred Therapy, (PCT) and a wait-list control in the treatment of PTSD related to CSA. The CBT group had a higher dropout rate than the other two conditions, with the highest attrition occurring during the imaginal exposure stage of the CBT intervention. A diagnosis of a personality disorder was not an exclusion criterion. Interestingly, all of the individuals with borderline personality disorder randomised to the CBT group dropped out. The higher drop-out in the CBT group affected randomisation with more participants being randomised to the CBT group when higher drop-out rates became evident. Initial intention to treat analyses were conducted on all the data, univariate and t-test analyses were subsequently conducted on treatment completer data. The overall results suggested that CBT and PCT were superior to wait-list controls in reducing PTSD symptoms, and in improving scores on measures of depression, anxiety, anger, quality of life, dissociation and hostility. The high attrition rate for the CBT group indicates that this treatment and, in particular, the imaginal exposure element may be less acceptable to individuals with complex trauma than other interventions.

Studies which address other psychological sequelae

Two studies used a cognitive behavioural approach to address psychological sequelae other than PTSD. EMDR was examined in an RCT which did not assess for PTSD diagnosis, but addressed trauma symptoms (Edmond et al., 1999). EMDR was compared with routine psychotherapy, or a delayed treatment control group. Unlike the studies of CBT-oriented therapies for the treatment of PTSD, the methodological quality of the EMDR study was reduced by the lack of a blind assessor and assessment of treatment fidelity. Six sessions of EMDR were effective in reducing post-traumatic, depressive and anxiety symptoms. Univariate ANOVAS demonstrated no significant differences post-treatment between interventions, but at the three month follow-up only the EMDR group maintained this improvement with large effect sizes. Some of the therapeutic techniques of routine therapy overlapped with EMDR. This may be reflected in the lack of significant difference between modalities post-treatment. There were seven individuals lost to follow-up at the three month stage. However, there was no attrition during pre and post-test stages of the study suggesting acceptability of the intervention. At the 18 month follow-up which included 72% of participants from the previous study, these gains were maintained (Edmond & Rubin, 2004).

Steil et al., (2011) conducted a single group outcome study examining Cognitive Restructuring and Imagery Modification (CRIM) in reducing the feeling of being contaminated (FBC). Nine women received treatment consecutively and outcomes indicated that CRIM has the potential to reduce FBC and PTSD symptoms. The authors used Friedman's tests to assess for changes over time and Wilcoxon tests were used for post-hoc analyses. Bonferroni adjustment was used to reduce the likelihood of a Type 1 error. A further strength of the study was the lack of attrition which ruled out the use of intent to treat analyses. However, the findings are limited by the small sample size and the lack of a comparison group.

Summary

In conclusion, CBT oriented interventions have been shown to be effective in treating symptoms of PTSD and broader trauma symptoms. The lack of a control group in the Steil et al.,(2011) study limits the conclusions about the use of CBT in treating FBC. In particular, the high methodological quality of the evidence for CPT allows strong conclusions to be drawn regarding the use of CPT. Furthermore, two of the studies examining CPT appear to be adequately powered in contrast to the majority of studies included in the review (Resick et al., 2002; Resick et al., 2003). In addition, CBT appears to be promising for the treatment of PTSD related to CSA, because 82.4% of participants no longer met the criteria for PTSD following treatment. However, the acceptability of this treatment is called into question as a result of the attrition rate. CBT was comparable to PCT with small to medium effect sizes in the treatment of co-morbid depression, anxiety, dissociation, anger, hostility and cognitive distortions. These gains were maintained at six months with 76.5% of the CBT group no longer meeting the criteria for PTSD. Importantly, both CBT and PCT also demonstrated significant improvements in quality of life. Other CBT oriented interventions (e.g. EMDR and CPT) also appear to be effective in reducing co-morbid symptoms of depression. At follow-up, symptoms of depression were significantly reduced with large effect sizes. Anxiety was also significantly reduced. For EMDR, however, there were no significant differences on these measures at post-test.

Mindfulness oriented interventions

Two single group design outcome studies examined programmes based on mindfulness skills. Mindfulness has been described as "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (Kabat-

Zinn, 1991, p. 4). A number of therapeutic approaches have been developed which are based on this concept including Mindfulness Based Stress Reduction course which uses mindfulness skills to manage distress (Kabat-Zinn, 1991). Kimbrough et al. (2010) studied a manualised Mindfulness Based Stress Reduction (MBSR) course, delivered to 27 survivors of childhood sexual abuse. Analyses were thorough including a priori sample size calculation, effect size calculations and intention to treat analyses. Linear regression analyses and t-tests demonstrated statistically significant improvements with large effect sizes were observed in PTSD, and depressive and anxiety symptoms. However, study participants were also in concurrent therapy with a licensed practitioner, which limits the conclusions that can be drawn about the effectiveness of MBSR. Furthermore, a large number of eligible participants were excluded due to logistical issues which reduced the sample size significantly. There was reasonable retention of participants up to and including eight week follow-up.

Steil, Dyer et al. (2011) addressed chronic CSA-related PTSD with a related co-morbid diagnosis, such as personality disorder or major depressive disorder, using a three month residential Dialectical Behavioural Therapy approach (Linehan, 1993). Although DBT is grounded in mindfulness skills, much of the therapy is also CBT oriented (Linehan, 1993). Unlike the majority of studies included in this review, the research took place in an inpatient setting. PTSD symptomatology was the primary outcome, depression, anxiety and general psychopathology were examined as the secondary outcomes in the study. Hierarchical linear growth modelling was the mode of analysis. This model indicated a significant reduction over time for PTSD symptoms. The effect sizes for this therapy were variable. Similar to Kimbrough et al. (2010), there are limitations to the conclusions which can be drawn from this study, due to the lack of a control group, concurrent drug therapy and the inclusion of individuals who have previously engaged

in a DBT intervention. Nonetheless, large effect sizes were demonstrated on the Post-traumatic Diagnostic Scale (PDS) and medium to large effect sizes were found for the Symptom Check-list-90 Revised, Beck Depression Inventory and State-Trait Anxiety Inventory.

Summary

Large effect sizes have been found supporting the use of mindfulness based interventions in treating PTSD symptoms, general pathology depression and anxiety in survivors of CSA. However, in both studies there were also concurrent forms of therapy and a lack of comparison group which confound the conclusions which can be drawn about the effectiveness of mindfulness in treating the psychological sequelae of CSA.

Narrative oriented interventions

Batten et al., (2002) conducted the only study examining a narrative oriented intervention included in the review. The randomised trial, analysed using repeated measures multivariate analysis of variance (MANOVA) indicated that written disclosure had virtually no effect on psychological distress and depressive symptoms. In contrast, the control group – who participated in writing about time management – experienced a reduction in psychological distress and depressive symptoms over time. However, a number of factors need to be taken into consideration regarding these results. There may have been some priming because participants were informed at the initial assessment that they may have to write about childhood trauma; therefore, increasing the risk of selection bias. Blinding to treatment group was ineffective, as research assistants were able to correctly classify 84% of participants by treatment. The population may also have lacked ecological validity as the women included in the study appeared to have had mild levels of distress.

Summary

There was no support found for the use of narrative therapy in reducing psychological distress or depressive symptoms in survivors of CSA. This finding is surprising given the findings of previous studies which have found written disclosure beneficial for trauma survivor's health (Pennbaker & Susman, 1988). It is possible that repeated practice and exposure to the written disclosure would be required to see a significant change.

Interpersonal oriented interventions

Talbot et al. (2005) conducted a pilot study followed by a randomised effectiveness trial (Talbot et al., 2011), examining interpersonal psychotherapy (IPT) versus usual care psychotherapy for depressed women who experienced childhood sexual abuse. IPT is a time limited therapy which focuses on addressing the relationships of the person and the way in which interpersonal interactions can be improved. Strengths of the Talbot (2011) study's analyses included a power calculation with power set at .80, although this was to detect a small effect size of d=0.38 between groups difference on psychometric measures. Furthermore, intention to treat analyses were conducted to assess change over time using logistic modelling. Randomisation was successful with no differences detected between groups on diagnostic measures or demographic information. The trial also appeared ecologically valid, but had a number of shortcomings, including a small sample size and variation in concurrent anti-depressant use, and number of sessions attended. The IPT group attended approximately twice as many therapy sessions. These variables could have influenced the conclusion that IPT resulted in improved outcomes. However, secondary analyses with session attendance included as a covariate demonstrated that the number of sessions did not alter the outcomes. Outcomes at 36

weeks showed IPT to be superior on measures of depressive symptoms, PTSD symptoms and shame. Although there was a statistically significant improvement in depressive symptoms, clinically, scores on the Hamilton Rating Scale for Depression (HRSD) remained high at 36 weeks.

Summary

IPT appears to be effective in treating depression symptoms, shame and PTSD symptoms; however, the evidence-base is still very much in its infancy. Further studies will be required without concurrent anti-depressant use and larger sample sizes in order to drawn firm conclusions about the efficacy in treating depression in survivors of CSA. In addition, the unequal dosage comparison whereby participants received a greater number of IPT sessions may have impacted on outcome.

Body oriented therapies

Price (2005, 2007) examined body oriented therapy as an adjunct to psychotherapy in recovery from childhood sexual abuse. Body oriented therapy involves "the combination of body work…and the emotional processing of psychotherapy" (Price 2005, p.47). Repeated measure analysis of variance (ANOVA) comparing the effects of the intervention at six time points, involving eight participants, suggested that body oriented therapy resulted in reduced SCL-90 global scores, PTSD and physical symptoms (Price, 2005). There was no significant group-by-time linear trend found. This randomised design (body oriented psychotherapy versus waitlist control) had a number of shortcomings, including a lack of blinding of the investigator, as well as participants, and small sample size.

This study was followed up by an efficacy study comparing body orientated therapy with massage therapy in a population of 24 adult females receiving psychotherapy (Price, 2005). Participants were randomised to the experimental groups and received eight, 1 hour long sessions provided by the research clinicians. Both treatment protocols were standardised and delivered over clothing. Repeated measures ANOVA demonstrated significant improvement on measures of psychological well-being, physical well-being and body connection were found for both groups. There was no significant difference between outcomes in the groups indicating that neither protocol based treatment was superior. In a later publication, Price (2007) analysed dissociation using the data collected for the previous study. Pearson's correlations highlighted a strong association between the reduction of dissociation following body therapy and positive health outcomes. The results did not distinguish between the massage and body oriented therapy.

Other psychotherapeutic approaches

Six additional studies consisted of treatments which were grounded in experiential and systemic psychotherapy, psychodynamic psychotherapy, cognitive analytic therapy (CAT), forgiveness therapy, humanistic psychotherapy and short-term focal integrative therapy.

Ryan et al. (2005) used a patient preference design with random allocation to either treatment of choice or waiting list. An issue with this type of randomisation is that patients may comply better than average when receiving their preferred treatment. Short-term focal integrative therapy was offered in either individual or group format. Both individual and group treatments resulted in significant improvements on the Brief Symptom Inventory, Beck Depression Inventory, the Belief Inventory and the Self-

concept questionnaire. At follow-up, gains were maintained for all measures, with the exception of the Brief Symptom Inventory for those who opted for group treatment.

A yoked, randomised experimental and control group design was used to examine forgiveness therapy (Freedman & Enright, 1996). Forgiveness therapy is a manualised intervention where the goal of therapy is forgiveness of the abuser. Analysis occurred on the level of the individual rather than the group; matched paired t-tests were used to compare the amount of change between the experimental and control groups. The experimental group showed significant improvement on anxiety and depression measures, compared with the wait-list control group. The small sample size (n=12) and the quasi randomised design limits the strength of the conclusions which can be drawn about the efficacy of forgiveness therapy.

Clarke and Llewelyn (1994) examined personal constructs and outcomes for childhood sexual abuse survivors using a cognitive analytic therapy framework. Only nine individuals participated and one individual received only eight weeks of the 16 week intervention. In addition to psychometric measures, participants were required to complete a single element and a dyad grid. Single element grids were used to examine the ways in which women construed themselves or significant others and dyad grids were used to examine the ways in which the women construed their relationships with their abusers or significant others. Although there were some improvements on measures such as the General Severity Index (GSI) of the SCL-90R, BDI and Rosenberg self-esteem scores, levels of distress were high post-treatment. The results of the analysis of the exploratory grids generated a large number of inter-relationships. The authors chose to report only those with the greatest significance which suggests that reporting of results may be biased. The authors report that the findings from the single and dyad

grids indicate that abuse forms a central part of participant's relationships and the authors suggest that this makes revictimisation more likely. This study also lacks internal validity due to possible selection bias.

Price et al., (2004) evaluated short-term psychodynamic psychotherapy (STPP) in a naturalistic sample of individuals referred to as an outpatient psychological clinic, with and without a history of childhood sexual abuse. Treatment was of variable duration dependent on clinician judgement which limits the comparability of participants' progress. Repeated measures ANOVA demonstrated significant improvements were shown in the CSA sample on measures of distress, functioning and personality variables. Differential rates of change between groups were also examined from pre-treatment to post-treatment. Univariate analyses of covariance using pretreatment and third session data highlighted no significant differences between groups in rates of change for self-report of distress, relational, social or occupational functioning. Strengths of the study methodology include the measurement of treatment adherence and therapeutic alliance However, the small sample size (n=12 CSA participants) may have resulted in power limitations.

A humanistic psychotherapy approach is described by Smith et al., (1995) who examined "Breakfree", a pilot therapy service for adults with a history of CSA. Psychotherapy was part of a comprehensive package of care, including a drop-in facility and phone contact, an out-of-hours paging service, a befriending service, a limited "time out facility" where a client can stay a night or two, and support for family and friends at the client's request. Not all of the participants completed all of the psychometric measures. Fifty nine of the 89 individuals, who completed measures at the start of the intervention, completed them post-treatment. Wilcoxon matched pairs signed ranks tests

demonstrated significant improvement on psychological scores; however, it is not possible to delineate the impact of the different aspects of this intervention which may have influenced outcome. Intentions to treat analyses were not conducted.

MacIntosh and Johnston (2008) describe Emotion Focused therapy (EFT) for couples, where one of the pair has experienced CSA. This treatment is grounded in experiential psychotherapy. The authors used a mixed methods analysis to examine the effect of EFT on couple adjustment and trauma symptoms. Participants completed a set of psychometric measures including The Dyadic Adjustment Scale (Spanier, 1976), the Trauma Symptom Inventory (TSI; Briere, Elliot, Harris & Cotman, 1995) and the Clinician Adminstered PTSD Scale (CAPS; Blake et al., 1990). Participants reported significant improvements in relationship satisfaction and half of the sample demonstrated clinically significant change on trauma symptoms. Thematic analysis was also conducted on audiotapes of therapy sessions. These analyses highlighted the challenges couples faced in fully engaging with the therapy. Issues with this study included a lack of control group, limited quantitative analysis and a small sample size.

Summary

The studies discussed in this category tend to address general psychopathology, anxiety and depression symptoms. There is limited evidence for any of the above therapies in the treatment of trauma symptoms. However, short-term focal integrative therapy, forgiveness therapy, psychodynamic psychotherapy and humanistic psychotherapy had significant effects on the treatment of depression, anxiety and psychological distress. EFT also proved significant in improving relationship satisfaction. However, conclusions about these studies are limited by the small sample sizes.

1.5.6 Summary of treatment outcomes

Five of the studies in this review are of a high methodological quality and 18 are of a moderate or adequate methodological quality. The evidence-base is most developed for CBT oriented approaches, with particularly robust findings for cognitive processing therapy in the treatment of PTSD symptoms. The evidence-base is smaller for IPT and less methodologically robust, but the findings of one randomised control trial demonstrate potential for this therapy in the treatment of depression in women who have been sexually abused in childhood. There was only one narrative oriented study which showed less promise in the treatment of mental health problems of survivors of CSA. The studies examining body oriented therapies, mindfulness and other psychotherapeutic modalities were of a methodological weaker standard and it is, therefore, difficult to draw firm conclusions about efficacy or effectiveness.

1.5.7 Dose-response

Literature examining the dose-response relationship in psychotherapy outcome have suggested that between 13 and 18 sessions of psychotherapeutic intervention are required for 50% of patients to improve (Hansen, Lambert, & Forman, 2006). The average number of sessions was calculated for each of the treatment orientations in this review, excluding residential treatments. In terms of the literature reviewed in this study, 13.7 (range: 2–19) was the average number of sessions offered in CBT oriented interventions. Unfortunately, McDonagh et al. (2005) provided an unequal treatment dosage between treatment groups, which limits the comparisons that can be made between CBT and PCT. EMDR was provided over six sessions, additional sessions may have resulted in improved outcomes. There was an average of eight sessions provided in mindfulness and body oriented interventions, 25.8 sessions for other psychotherapeutic orientations and 16 sessions were offered in IPT interventions.

1.5.8 Psychological sequelae

Approximately one third of the studies reviewed focused on PTSD as the primary sequelae to be addressed. Around another third stated that their focus was on CSA-related symptoms, without giving specific details. The remaining psychological sequelae targeted included depression, psychological health/well-being, affect regulation and interpersonal difficulties, relationship problems, cognitive distortions, and dissociation.

1.5.9 Measures used

There was variability in how sequelae were measured, which affects the comparability of studies (see Appendix 4). In particular, there were a total of 12 (three interviews and nine self-report) measures used to assess PTSD/trauma symptoms. All of the measures used have established validity and reliability. CAPS, which is often considered to be the 'gold standard' in PTSD assessment, was used in seven studies (Chard, 2005; McDonagh et al., 2005; McIntosh & Johnson 2005; Owens et al., 2001; Resick et al., 2002; Resick et al., 2003). Three measures which assess PTSD according to *Diagnostic and Statistical Manual of Mental Disorders,* (DSM-III, American Psychiatric Association, APA, 1980) and DSM-IV (American Psychiatric Association (APA), 1994) were used in nine studies (Batten et al., 2002; Chard, 2005; Kimbrough et al., 2010; McDonagh et al., 2005; McIntosh & Johnson, 2005; Owens et al., 2001; Resick & Nishith et al., 2002; Resick et al., 2003; Talbot et al., 2011). The Sexual Abuse Exposure Questionnaire (SAEQ; Rowan, Foy, Rodriguez & Ryan, 1994), which assesses the different forms of sexual abuse experienced prior to the age of sixteen, was used in two studies (Chard, 2005; Owens et al., 2001).

There were also several scales relating to mood states, for instance, interpersonal, cognitive disturbance, and generic (i.e. non-trauma specific) measures (See Appendix 4). One of the reasons for such variability is likely to be the difficulty in capturing the huge range of symptoms associated with complex trauma (Courtois & Ford, 2009). The

primary focus in terms of outcome for six of the studies was PTSD/trauma symptoms, while additional studies including PTSD measures as secondary outcome measures. Secondary outcomes in studies of PTSD tended to be measures of depression and anxiety symptoms. There was greater variability in the symptom measures used in the studies which stated that they were examining the psychological effects of CSA or psychological well-being (e.g. Batten et al., 2002; Price, 2006; Price, 2007).

1.6 Discussion

The primary aims of this systematic review were to examine the current literature for interventions in the treatment of the psychological sequelae of CSA; appraise the range of treatment orientations; explore the methodological rigour of treatment studies and make recommendations for further research in this area.

The main methodological findings and outcomes

A total of 23 treatment studies (with 18 different forms of intervention) met the inclusion criteria and were included in the present review. Of the 23 studies, ten were randomised trials and 13 were non-randomised outcome studies. These studies were synthesised qualitatively by treatment orientation, resulting in the six broad modalities examined within the review.

This report aimed to build on previous reviews and meta-analytic studies of treatment outcome, by including recent publications and studies omitted from previous reviews. Each study was reviewed using an adapted version of the SIGN methodological checklist. The studies with the highest grading according to the quality criteria were Chard et al. (2005), Edmond et al. (1999), McDonagh et al. (2005), Resick et al. (2003) and Resick et al. (2008). Particular strengths of these studies included random assignment, adequate concealment and reporting of power and effect size calculations (See Table 1). Those with lower quality ratings had a number of shortcomings, including small sample sizes, lack of comparison group, deviations in treatment protocols and confounding variables such as concurrent treatment.

This review has highlighted that interventions focus on a range of psychological sequelae related to CSA. In addition, there is large variability in the measurement of symptoms, with studies focusing on a range of primary and secondary outcomes. In

particular, it has been observed that a wide range of measures have been used to examine PTSD/trauma symptoms. This variability may be a reflection of the parallel progress that has been made in the development of measures of assessment for PTSD in the last twenty years and, around the same time, the burgeoning evidence-base for psychological treatment for symptoms relating to CSA.

Validated and reliable assessment (ideally multimodal assessment) is fundamental to the quality of research. However, comparability and synthesis of outcome across studies is challenged by broad variability in measurement. In future, reviews which choose to focus on PTSD as a primary outcome may benefit from the use of multimodal assessment using a consistent battery of assessment across outcome studies. However, research in this field needs to balance the acknowledgement that trauma symptoms are often a psychological consequence of CSA, but there are also a wider range of psychological sequelae observed, such as depression, anxiety, personality disorders and complex presentations. The use of outcome measures or assessment batteries should reflect this.

The available data suggest psychotherapeutic interventions, particularly CBT oriented interventions such as CPT, are largely effective in treating PTSD symptoms and co-morbid issues, such as depression and anxiety, in survivors of childhood sexual abuse. A study of CBT had higher attrition in the CBT treatment group, which suggests that although it is an effective treatment, it may be less acceptable to those who experience higher levels of trauma symptoms (McDonagh et al., 2005). IPT was also shown in one study of moderate methodological quality to be effective in reducing depression in female survivors of childhood sexual abuse, although the group retained high levels of

depressive symptoms (Talbot et al., 2011). Mindfulness oriented intervention studies lacked comparison data and the results were mixed for other psychotherapy orientations.

Data on long-term follow-up, i.e. over a year, was only available for EMDR, which was shown to be effective in reducing trauma symptoms. There was no evidence to support the use of narrative therapy in the disclosure of childhood sexual abuse. Body oriented therapy studies had small samples sizes and were not shown to be more effective than massage. Ryan and Nitsun et al. (2005) was the only study included which compared group and individual therapy with a waiting list control group. The results of this study suggest no significant difference in outcome between group and individual therapy. However, these results may be influenced by the patient preference design.

How do these findings compare with previous studies?

The evidence from previous reviews and meta-analyses have supported psychological treatment for the mental health difficulties related to childhood sexual abuse (Cahill et al., 1991; Callahan et al., 2004; de Jong & Gorey, 1996; Kessler, et al., 2003; Lubin, 2007; Martsolf & Draucker, 2005; Price et al., 2001; Ryan & French, 2003; Taylor & Harvey, 2010). The only previous review to examine individual therapies exclusively made the following methodological recommendations: studies of individual therapy for the treatment of CSA should provide detailed accounts of the populations; measure client satisfaction; provide multiple perspectives in assessment; use treatment aided and informed by a manual; be theoretically grounded and provide both specific symptom measures and measures of general functioning and quality of life (Price et al., 2001).

The current review contains 15 additional studies, either published since 2001 or omitted by Price et al. (2001). The majority of the studies published since 2001 have included

descriptive information regarding the populations included and details of sexual abuse history. However, only two studies (Chard, 2005; Owens et al., 2001) used a psychometric measure to assess sexual abuse exposure (The Sexual Abuse Exposure Questionnaire, SAEQ; Rowan et al., 1994) and Batten et al. (2002) utilised two questionnaires relating to the sexual history of participants. It is recommended that future studies in this field utilise standardised measures to gather information regarding participant's sexual abuse history, as this is likely to be a moderating factor in treatment outcome (Taylor & Harvey, 2010). None of the studies reported patient satisfaction; this is likely to also be a moderating variable and should be explored further in future research. Furthermore, information on the acceptability of treatment is fundamental to the clinical utility of interventions.

In keeping with Price et al.'s (2001) recommendation that studies utilise multimodal assessment, several of the studies have included interview data and self-report measures. In addition, almost all studies included a measure of general functioning, as well as symptom measures. However, there was only one study which examined quality of life (McDonagh et al., 2005).

Although, many of the treatments are grounded in theoretical models and have been developed from previous work in the field of PTSD, the studies reviewed have not always been explicit about the theoretical grounding of the treatment. In summary, the evidence for psychological therapy has thrived since Price et al.'s (2001) review of the literature. However, shortcomings such as a lack of information about therapeutic alliance and patient satisfaction have not developed with the growing literature base. This information is likely to be fundamental in understanding the utility of treatments, as

the effectiveness of therapy often depends on the establishment of a secure base (Courtois & Ford, 2009).

Limitations of the literature and recommendations

Conspicuous by their absence were studies examining treatment of CSA in male populations. There were only four studies which included males, and males made up a small proportion of the population in these studies. This may reflect the greater under-reporting of CSA in male populations, as well as possible difficulties engaging males in psychological therapy (Mahalik, Good, & Englar-Carlson, 2003; Paine & Hansen, 2002).

Many of the studies excluded individuals diagnosed with borderline personality disorder, or recent suicidal or self-destructive behaviours. These are often associated with complex trauma and so the generalisability of treatment outcome is limited by these strict exclusion criteria (Courtois & Ford, 2009).

There needs to be further acknowledgement of the different effects of interpersonal trauma versus general trauma. Childhood sexual abuse is an interpersonal trauma, yet there is a lack of focus on measuring restorative interpersonal outcomes in treatment studies. In addition, it is acknowledged that childhood sexual abuse often results in difficulty in regulating emotions, yet none of the studies in this review examined regulatory strategies. Foa et al., (2009) suggest that for some patients functional improvement may be a more important outcome than trauma symptom reduction. Frequently reported sequelae of CSA, such as dissociation, impulsivity, somatisation, interpersonal difficulties or changes in identity, may be a priority over changes in clinical diagnosis. Future research in this area will benefit from integrating recent

models of complex trauma which conceptualise these sequelae and examining treatments, such as emotion focused therapies and therapies which focus on formulating and addressing attachment and interpersonal difficulties. There are a number of therapies recommended for the treatment of complex trauma such as contextual therapy, sensorimotor therapy and family systems therapy, which have not been evaluated with this population (Courtois & Ford, 2009). In addition, new wave CBT oriented therapies, such as Acceptance and Commitment Therapy (ACT), are absent from the evidence-base.

In summary, there have been clear developments in the evidence for the treatment of the psychological sequelae of childhood sexual abuse. Indeed, the methodological quality of studies appears to have improved in recent years. However, this review has highlighted a number of methodological limitations and challenges in reviewing outcome studies for the psychological sequelae of CSA. In terms of methodology, the following is recommended: the use of a consistent battery of outcome measures for trauma symptoms to ease comparability of outcomes across studies, explicit treatment targets which relate to psychological models of complex trauma, an increase in the number of adequately powered RCTs, broader inclusion criteria which reflect a range of presentations, reporting of statistical power and effect size and the use of intention to treat analyses.

Aside from these methodological improvements, there are a number of recommendations that can be made relating to future directions in the outcome literature. There are gaps in the evidence-base for new wave therapies, such as ACT, and also therapies based on models of complex trauma, such as sensorimotor psychotherapy. Future research should examine therapies which explicitly address some of the criteria proposed as the basis for complex PTSD, for instance: ‘a) alterations in the regulation of

affective impulses, b) alterations in attention and consciousness, c) alterations in self-perception, d) alterations in the perception of the perpetrator, d) alterations in relationship to others, e) somatisation and medical problems relating to the abuse, and f) alterations in systems of meaning' as well as additional pathology and behavioural outcomes (Courtois & Ford, 2009).

This review has highlighted that psychotherapy can be effective in reducing the psychological symptoms related to CSA. In particular, CBT oriented interventions are effective at reducing trauma symptoms and IPT has been shown to be effective in addressing depressive symptoms in this population. IPT has shown promise and future research examining the use of this therapy in a population of males and females is likely to be beneficial. Methodologically rigorous studies which examine the efficacy of mindfulness and body oriented interventions are required before firm conclusions can be drawn about the use of these therapies. Ultimately, the choice of treatment approach should be based on evidence for efficacy, but must also take into account patient preference and the co-morbid presentations common in survivors of childhood sexual abuse. Therefore, examination of the acceptability of CBT and its efficacy with co-morbid presentations is required.

Limitations of this review

The strict inclusion criteria of this review may have resulted in the omission of important evidence for the use of psychological therapies in treating the mental health difficulties associated with CSA. Three studies were omitted because they provided information about the treatment of childhood trauma, but did not provide evidence specifically for the individuals who had experienced CSA. In addition, qualitative studies and case studies were excluded. The methodological quality criteria used in this

review were based on an established and respected methodological checklist. However, this checklist was adapted with the addition of three items. These adaptations may have impacted on the robustness of this tool. Although there was a high level of inter-rater agreement, interpretation of the checklist and narrative synthesis remains a subjective process. The conclusions drawn in this review should be interpreted in light of these limitations.

Acknowledgements: Grateful thanks go to all the authors who replied to requests for unpublished literature.

1.7 References

Arriola, K. R. J., T. Louden, T., Doldren, M. A., & Fortenberry, R. M. (2005). A meta-analysis of the relationship of child sexual abuse to HIV risk behavior among women. *Child Abuse and Neglect*, *29*, 725–746.

Batten, S. V., Follette, V. M., Rasmussen-Hall, M. L., & Palm, K. M. (2002). Physical and psychological effects of written disclosure among sexual abuse survivors. *Behavior Therapy, 33*(1), 107–122.

Blake, D., Weathers, F., Nagy, L., Kaloupek, D., Klauminzer, G., Charney, D. et al. (1990). A clinician rating scale for assessing current and lifetime PTSD: The CAPS-1. *Behavior Therapy, 13*, 187-188.

Briere, J., Elliot, D.M., Harris, J., & Cotman, A. (1995) Trauma symptom inventory: Psychometric characteristics and associations with childhood and adult trauma in clinical samples. *Journal of Interpersonal Violence, 10,* 387-401.

Cahill, C., Llewelyn, S. P., & Pearson, C. (1991). Treatment of sexual abuse which occurred in childhood: A review. *British Journal of Clinical Psychology, 30*(1), 1–12.

Callahan, K. L., Price, J. L., & Hilsenroth, M. J. (2004). A review of interpersonal-psychodynamic group psychotherapy outcomes for adult survivors of childhood sexual abuse. *International Journal of Group Psychotherapy, 54*(4), 491–519.

Chard, K. M. (2005). An evaluation of cognitive processing therapy for the treatment of posttraumatic stress disorder related to childhood sexual abuse. *Journal of Consulting and Clinical Psychology, 73*(5), 965–971.*

Clarke, S., & Llewelyn, S. (1994). Personal constructs of survivors of childhood sexual abuse receiving cognitive analytic therapy. *British Journal of Medical Psychology, 67*(3), 273–289.*

Cloitre, M., Koenen, K. C., Cohen, L. R., & Han, H. (2002). Skills training in affective and interpersonal regulation followed by exposure: A phase-based treatment for PTSD related to childhood abuse. *Journal of Consulting & Clinical Psychology, 70*(5), 1067–1074. *

Courtois, C. A. & Ford, J. D. (2009). *Treating Complex Traumatic Stress Disorders: An Evidence- Based Guide*. New York: Guilford Press

Dechartres, A., Charles, P., Hopewell, S., Ravaud, P., & Altman, D. G. (2011). Reviews assessing the quality or the reporting of randomized controlled trials are increasing over time but raised questions about how quality is assessed. *Journal of Clinical Epidemiology, 64*(2), 136–144.

de Jong, L., & Gorey, K. M. (1996). Short-term versus long-term group work with female survivors of childhood sexual abuse: A brief meta-analytic review. *Social Work with Groups*, *19*, 19–27.

Echeburúa, E., De Corral, P., Zubizarreta, I., & Sarasua, B. (1997). Psychological treatment of chronic posttraumatic stress disorder in victims of sexual aggression. *Behavior Modification, 21*(4), 433–456.*

Edmond, T., & Rubin, A. (2004). Assessing the long-term effects of EMDR: Results from an 18-month follow-up study with adult female survivors of CSA. *Journal of Child Sexual Abuse, 13*(1), 69–86.*

Edmond, T., Rubin, A., & Wambach, K. G. (1999). The effectiveness of EMDR with adult female survivors of childhood sexual abuse. *Social Work Research, 23*(2), 103–116.*

Finestone, H. M., Stenn, P., Davies, F., Stalker, C., Fry, R., & Koumanis, J. (2000). Chronic pain and health care utilization in women with a history of childhood sexual abuse. *Child Abuse & Neglect, 24*(4), 547–556.

Finkelhor, D. (1994). The international epidemiology of child sexual abuse. *Child abuse & Neglect*, *18*(5) 409-417.

Foa, E. B., Keane, T. M., & Friedman, M. J. (Eds.). (2000). *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies*. New York, NY: Guildford Press.

Foa, A. B., & Meadows, E. A. (1997). Psychosocial treatments for posttraumatic stress disorder: a critical review. *Annual Review of Psychology*, *48*, 449–80.

Freedman, S. R., & Enright, R. D. (1996). Forgiveness as an intervention goal with incest survivors. *Journal of Consulting and Clinical Psychology, 64*(5), 983–992.*

Guyatt, G. H., Oxman, A. D., Kunz, R., Bozek, J., Alonso-Coello, P., Rind, D., Devereaux, P. J., Montori, V. M., Freyschuss, B.,Vist, G., Jaeschke, R., Williams, J. W., Murrad, M. H., Sinclair, D., Falck, Yttler, Y., Meerpohl, J., Whittington, C., Thorlund, K., Andres, J., & Schünemann, H. J. (2011). GRADE guidelines 6. Rating the quality of evidence-imprecision. *Journal of Clinical Epidemiology*, *64*(12), 1283–93.

Hansen, N. B., Lambert, M. J., & Forman, E. M. (2006). The Psychotherapy Dose-Response Effect and Its Implications for Treatment Delivery Services. *Clinical Psychology: Science and Practice, 9*(3), 329-343

Higgins, J., & Green, S. (Eds.). (2011). *Cochrane handbook for systematic reviews of interventions, version 5.1.0.* (updated March 2011). The Cochrane Collaboration. Retrieved from *http://www.cochrane-handbook.org*

Hillberg, T., Hamilton-Giachritsis, C. & Dixon, L. (2011). A review of meta-analyses on the association between child sexual abuse and adult mental health difficulties: A systematic approach. *Trauma Violence Abuse, 12*(1) 38-49.

Hulme, P. A. (2000). Symptomatology and health care utilization of women primary care patients who experienced childhood sexual abuse. *Child Abuse & Neglect, 24,* 1471–1484.

Kabat-Zinn , J. (1991). *Full catastrophe living: using the wisdom of your body and mind to face stress, pain, and illness*, Delta Trade Paperbacks

Kessler, M. R. H., White, M. B., & Nelson, B. S. (2003). Group treatments for women sexually abused as children: A review of the literature and recommendations for future outcome research. *Child Abuse and Neglect, 27*(9), 1045–1061.

Kimbrough, E., Magyari, T., Langenberg, P., Chesney, M., & Berman, B. (2010). Mindfulness intervention for child abuse survivors. *Journal of Clinical Psychology*, *66*, 17–33.*

Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, *33*, 159–174.

Linehan, M. (1993). *Cognitive behavioural treatment of borderline personality disorder.* New York, NY: Guilford Press.

Lubin, H. (2007). Group and Individual Therapy for Childhood Sexual Abuse Survivors. *International Journal of Group Psychotherapy, 57* (2), 257-262.

MacIntosh, H. B., & Johnson, S. (2008). Emotionally focused therapy for couples and childhood sexual abuse survivors. *Journal of Marital and Family Therapy, 34*(3), 298–315.*

Mahalik, J. R., Good, G. E., & Englar-Carlson, M. (2003). Masculinity scripts, presenting concerns, and help seeking: Implications for practice and training. *Professional Psychology: Research and Practice*, *34,* 123–131.

Manglio, R. (2009). The impact of child sexual abuse on health: A systematic review of reviews. *Clinical Psychology Review*, *29*, 647–657.

Martsolf, D. S., & Draucker, C. B. (2005). Psychotherapy approaches for adult survivors of childhood sexual abuse: An integrative review of outcomes research. *Issues in Mental Health Nursing, 26*(8), 801–825.

McDonagh, A., McHugo, G., Sengupta, A., Demment, C. C., Schnurr, P. P., Friedman, M., & Descamps, M. (2005). Randomized trial of cognitive-behavioural therapy for chronic posttraumatic stress disorder in adult female survivors of childhood sexual abuse. *Journal of Consulting and Clinical Psychology, 73*(3), 515–524.*

Neumann, D. A., Houskamp, B. M., Pollock, V. E., & Briere, J. (1996). The long-term sequelae of childhood sexual abuse in women: A meta-analytic review. *Child Maltreatment, 1*(1), 6–16.

Owens, G. P., Pike, J. L., & Chard, K. M. (2001). Treatment effects of cognitive processing therapy on cognitive distortions of female child sexual abuse survivors. *Behavior Therapy, 32*(3), 413–424.*

Paivio, S. C., & Nieuwenhuis, J. A. (2001). Efficacy of emotion focused therapy for adult survivors of child abuse: A preliminary study. *Journal of Traumatic Stress, 14*(1), 115–133.*

Paine, M. L., & Hansen, D. J. (2002). Factors influencing children to self-disclose sexual abuse. *Clinical Psychology Review*, *22*, 271-295.

Pennbaker, J. W., & Susman, J. R. (1988). Disclosure of trauma and psychosomatic processes. *Social Science & Medicine, 26*(3), 327-332

Pereda, N., Guilera, G., Forns, M., & Gómez-Benito, J. (2009). The international epidemiology of child sexual abuse: A continuation of Finkelhor (1994). *Child Abuse & Neglect, 33*(6), 331–342.

Price, C. (2004). Characteristics of women seeking body-oriented therapy as an adjunct to psychotherapy during recovery from childhood sexual abuse. *Journal of Bodywork and Movement Therapies, 8*(1), 35–42.

Price, C. (2005) Body oriented therapy in recovery from childhood sexual abuse: an efficacy study. *Alternative therapies, 11*(5), 46-57.*

Price, C. (2006). Body-oriented therapy in sexual abuse recovery: A pilot-test comparison. *Journal of Bodywork and Movement Therapies, 10*(1), 58–64. *

Price, C. (2007) Dissociation reduction in body therapy during sexual abuse recovery. *Complementary therapies in Clinical Practice, 13*(2), 116-128.

Price, J. L., Hilsenroth, M. J., Petretic-Jackson, P. A., & Bonge, D. (2001). A review of individual psychotherapy outcomes for adult survivors of childhood sexual abuse. *Clinical Psychology Review, 21*(7), 1095–1121.

Price, J. L., Hilsenroth, M. J., Callahan, K. L., Petretic-Jackson, P. A., & Bonge, D. (2004). A pilot study of psychodynamic psychotherapy for adult survivors of childhood sexual abuse. *Clinical Psychology and Psychotherapy, 11*(6), 378–391.*

Radford, L., Corral, S., Bradley, C., Fisher, H., Bassett, C., Howat, N., & Collishaw, S. (2011). *Child abuse and neglect in the UK today*. London: NSPCC.

Resick, P. A., Galovski, T. E., Uhlmansiek, M. O., Scher, C. D., Clum, G. A., & Young-Xu, Y. (2008). A randomized clinical trial to dismantle components of cognitive processing therapy for posttraumatic stress disorder in female victims of interpersonal violence. *Journal of Consulting and Clinical Psychology, 76*(2), 243-258.*

Resick, P. A., Nishith, P., & Griffin, M. G. (2003). How well does cognitive–behavioral therapy treat symptoms of complex PTSD? An examination of child sexual abuse survivors within a clinical trial. *CNS Spectrums*, *8*, 340–355.*

Resick, P. A., Nishith, P., Weaver, T. L., Astin, M. C., & Feuer, C. A. (2002). A comparison of cognitive-processing therapy with prolonged exposure and a waiting condition for the treatment of chronic posttraumatic stress disorder in female rape victims**.** *Journal of Consulting and Clinical Psychology*, *70*(4), 867-879.*

Romano, E., & De Luca, R. V. (2005). Evaluation of a treatment program for sexually abused adult males. *Journal of Family Violence, 21*(1), 75–88*

Roodman, A. A., & Clum, G. A. (2001). Revictimization rates and method variance: A meta-analysis. *Clinical Psychology Review, 21*(2), 183–204.

Rowan, A. B., Foy, D. W., Rodriguez, N., & Ryan, S. (1994). Posttraumatic stress disorder in adults sexually abused as children. *International Journal of Child Abuse and Neglect*, *18*(1), 51–61.

Ryan, M., Nitsun, M., Gilbert, L., & Mason, H. (2005). A prospective study of the effectiveness of group and individual psychotherapy for women CSA survivors. *Psychology and Psychotherapy: Theory, Research and Practice, 78*(4), 465–479.*

Ryan, R. E., & French, S. (2003). *Assessing long-term therapy for the treatment of adult survivors of childhood abuse*. Monash University, The Centre for Clinical Effectiveness. Retrieved from http://www.med.monash.edu.au/healthservices/cce/evidence/pdf/c/938.pdf

Seligman, M. E. (1995). The effectiveness of psychotherapy: the consumer reports study. *American Psychologist*, *50*, 965–74.

Smith, D., Pearce, L., Pringle, M., & Caplan, R. (1995). Adults with a history of child sexual abuse: Evaluation of a pilot therapy service. *BMJ, 310*(6988), 1175–1178.*

Spanier, G. (1976) Measuring dyadic adjustment. *Journal of Marriage and the Family, 38,* 15-28

Spataro, J., Mullen, P. E., Burgess, P. M., Wells, D. L., & Moss, S. A. (2004) Impact of child abuse on mental health. Prospective study in males and females. *British Journal of Psychiatry, 18*(4) 416-421

Steil, R., Dyer, A., Priebe, K., Kleindienst, N., & Bohus, M. (2011). Dialectical behavior therapy for posttraumatic stress disorder related to childhood sexual abuse: A pilot study of an intensive residential treatment program. *Journal of Traumatic Stress*, *24*, 102–106.*

Steil, R., Jung, K., & Stangier, U. (2011). Efficacy of a two-session program of cognitive restructuring and imagery modification to reduce the feeling of being contaminated in adult survivors of childhood sexual abuse: A pilot study. *Journal of Behavior Therapy and Experimental Psychiatry, 42*(3), 325–329. *

Steine, I. M., Krystal, J. H., Nordhus, I. G., Bjorvatn, B., Harvey, A. G., Eid, J., Gronli, J., Milde, A. M., & Pallesen, S. (2012). Insomnia, nightmare frequency, and nightmare distress in victims of sexual abuse: The role of perceived social support and abuse characteristics. *Journal of Interpersonal Violence, 27*(9)1827-43.

Talbot, N. L., Conwell, Y., O'Hara, M. W., Stuart, S., Ward, E. A., Gamble, S. A., & Tu, X. (2005). Interpersonal psychotherapy for depressed women with sexual abuse histories: A pilot study in a community mental health center. *Journal of Nervous and Mental Disease, 193*(12), 847–850.*

Talbot, N. L., Chaudron, L. H., Ward, E. A., Duberstein, P. R., Conwell, Y., O'Hara, M., Tu, X., Lu, N., He, H., & Stuart, S. (2011). A randomized effectiveness trial of interpersonal psychotherapy for depressed women with sexual abuse histories. *Psychiatric Services, 62*(4), 374–380. *

Taylor, J. E., & Harvey, S. T. (2010) A meta-analysis of the effects of psychotherapy with adults sexually abused in childhood. *Clinical Psychology Review*, *30*(6), 749–767.

*Papers included in the Systematic Review

CHAPTER 2: INTRODUCTION BRIDGE

2.1 Chapter summary

The previous chapter highlighted some of the methodological weaknesses of the evidence-base for treatment studies of the psychological sequelae of childhood sexual abuse. One of the issues highlighted was the lack of treatments focusing directly on the models and criteria proposed as the basis for complex PTSD (Courtois & Ford, 2009). This research aims to aid the understanding of the emotional basis of psychopathology in survivors of CSA, so as to inform directions for treatment which might address the 'alterations in the regulation of affective impulses' associated with complex trauma (Courtois & Ford, 2009, p. 85).

This research primarily examines emotion, emotion regulation and associated psychopathology in a population of survivors of childhood sexual abuse. The thesis is comprised of two empirical studies reported as journal articles, both of which focus on the emotional experience of survivors of childhood sexual abuse (CSA). Furthermore, there are additional findings relating to acceptance, cognitive fusion and attachment presented in Appendix 23. The purpose of this chapter is to explain some key concepts at the core of the research, which are beyond the scope of the journal articles included.

2.2 Childhood sexual abuse

Studies have varied in their estimations of the prevalence of childhood sexual abuse, ranging from 20% for women and 5 to 10% for men (Finkelhor, 1994) to a more recent meta-analysis which suggested up to 55% for women and up to 60% for men in certain clinical populations (Pereda *et al*., 2009). CSA is considered to be a risk factor for psychopathology, with survivors often experiencing medical, psychological, behavioural and sexual disorders (Manglio, 2009). In particular, CSA has been associated with long-

term post-traumatic symptoms. Herman (1997) has stated that the diagnosis of post-traumatic stress disorder (PTSD) does not fit with the broad symptom picture associated with childhood trauma. Instead, it has been proposed that the term 'complex post-traumatic stress disorder' is used to define the symptoms associated with prolonged and repeated early life trauma (See Courtois & Ford, 2009 for a discussion).

Post-traumatic symptomatology, understood in the context of potential complex post-traumatic stress disorder following childhood sexual abuse, will be a focus of both Study 1 and 2. As there is no specific measure of complex PTSD, the Post-traumatic Checklist – Civilian version has been used to measure post-traumatic symptomatology. The limitations of this approach are discussed later in the thesis.

Previous research has established relationships between post-traumatic symptoms and emotion. There are a number of models of post-traumatic symptoms including socio-cognitive models (Ehlers & Clark, 2000; Foa *et al.* 1989; Shapiro, 1995) and the Dual Representation model (Brewin, Dalgleish & Joseph ,1996) which amalgamates information processing and cognitive theories. In addition there are several proposed models of emotion including univariate models where emotion is understood in terms of positive and negative effect, (Watson, Clark & Tellegen, 1988), multidimensional models (Plutchik, 1982) and basic emotion models (Eckman, 1999; Levenson, et al., 1992). In this thesis emotions and psychopathology are understood using the Schematic Propositional, Analogical and Associative Representation Systems (SPAARS) model (Power & Dalgleish, 2008).

2.3 Emotion: The Schematic, Propositional, Analogical and Associative Representation Systems (SPAARS) model (Power & Dalgleish, 2008)

A thorough explanation of the SPAARS model is beyond the scope of this chapter. However, six key concepts and underlying assumptions of the SPAARS model are outlined below:

1. Power and Dalgleish (2008) propose that there are **five 'basic' emotion** states represented by the terms 'Happiness, Sadness, Disgust, Anger and Fear'. These basic emotions, and their related appraisals (see Table 5), are believed to shape emotional development. The five basic emotions are considered the constituent components of more complex emotions; for example, the experience of sadness and happiness might result in the complex emotion of 'nostalgia' (Power & Dalgleish, 1997, p. 151). Power (2006) confirmed this structure in a study using the Basic Emotions Scale. Confirmatory factor analyses, which support a five factor model, with the five basic emotions intercorrelated with each other.

2. The SPAARS model endorses the **functionalism of emotion**; the premise that all emotions can be defined with regard to behaviour. It is proposed that all emotional states are comprised of an event, the interpretation of the event, subsequent appraisal, followed by physiological reactivity or action potential and behaviour (See Figure 2).

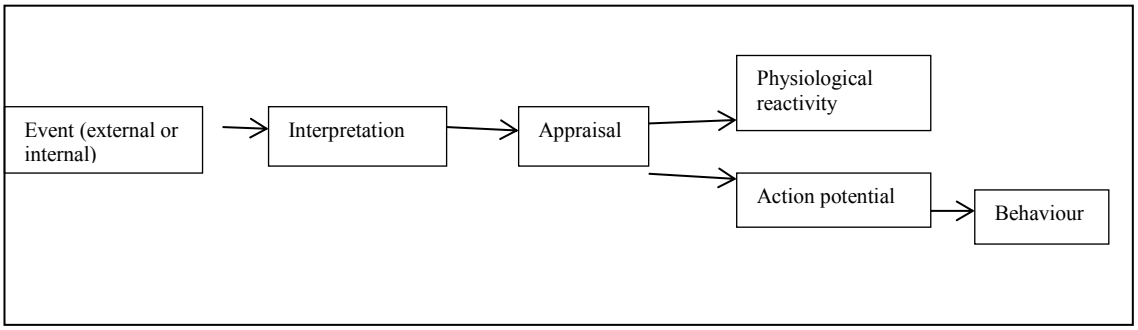


Figure 2: Components of an emotional state (Taken from Power & Dalgleish, 1997)

3. Of these components it is the appraisal that differentiates emotional states. The five basic emotions have associated appraisals (outlined in Table 6). Information about self, others, the world and goals are fundamental to emotion in the SPAARS model. People appraise events based on the domains of the self, other and the world.

Table 6: Appraisal components of basic emotions (Taken from Power & Dalgleish, 1997, p. 150).

Basic Emotion	*Appraisal*
Sadness	Loss or failure (actual or possible) of a value or goal
Happiness	Successful move towards, or completion of, a valued role or goal
Anger	Blocking or frustration of a role or goal through a perceived other agent
Fear	Physical or social threat to self, or valued role or goal
Disgust	Elimination or distancing from person, object or idea repulsive to self and to valued roles or goals

4. As stated previously, basic emotions can be considered to be the constituent components of complex emotions, e.g. nostalgia, but they can also be used to understand emotional disorder. Emotional disorders can be derived from either a basic emotion or the **coupling of basic emotions** (see Table 7). The SPAARS model, therefore, provides an explanation for both everyday emotion and emotion associated with psychopathology. This thesis seeks to understand the influence of emotions on the psychopathology often associated with CSA. Specifically, Study 1 seeks to examine the emotions which might be associated with post-traumatic symptoms in a population of survivors of CSA.

Table 7: Basic emotions and associated emotional disorders (Taken from Power & Dalgleish, 1997, p. 419).

Basic Emotion	*Coupled emotion*	*Emotional disorder*
Fear		Panic
		Phobias
		GAD*
		PTSD
	?Disgust	PTSD
Sadness	Anger	Depression
	Disgust	Depression
Anger		Pathological anger
		Morbid jealousy
Happiness		Polyannaism/Pathological optimism
		Hypomania/mania
		Love sickness
		De Clerambault's syndrome
Disgust	?Fear	Phobias
	?Fear	OCD**
		Suicide
		Eating disorders, etc.

*Generalised Anxiety Disorder **Obsessive Compulsive Disorder

5. Power and Dalgleish (2008) distinguish between unconscious and conscious psychological systems. They argue that it is possible to be aware of the appraisals which underlie an emotion, and also to hold an unconscious interpretation of an event. In addition, the conscious and unconscious appraisals can be conflicting. They argue that complex emotional experiences or emotional disorders may be the result of conflicting emotions and appraisals. In Study 2, an implicit association test is used to investigate associations of implicit (or unconscious) disgust self-concept with emotional disorder in a population of survivors of CSA.

6. Ultimately, SPAARS is a multilevel model with four levels of mental representation: Schematic, Propositional, Analogical and Associative. Processing of stimuli occurs at the analogical level (sensory information such as

sights, sounds smells). Output from the analogical level feeds into the top schematic model level (schemas or models about the world, self and others), the intermediate associative level (which results in automatic generation of emotion) or the lowest propositional level (abstract entities or beliefs). There are two routes to emotion, either via the schematic route – which requires effortful appraisals of goal related events – or via the associative level – where the emotion is automatically generated by association.

Underlying this theory is the idea that emotion can be generated automatically if a stimulus becomes paired with an emotion through repeated co-occurrences (Power & Dalgleish, 1999). This idea is key to the implicit association test discussed later in the thesis. Emotions generated via either Route 1 or 2 (see Figure 3) are described as modules. These modules can be maintained or suppressed by facilitatory or inhibitory processes, which act within feedback loops. It is possible for two or more emotions to occur simultaneously, and the feedback loops can cause these emotions to become coupled. The coupling of emotions is examined in relation to post-traumatic symptomatology in a population of CSA survivors.

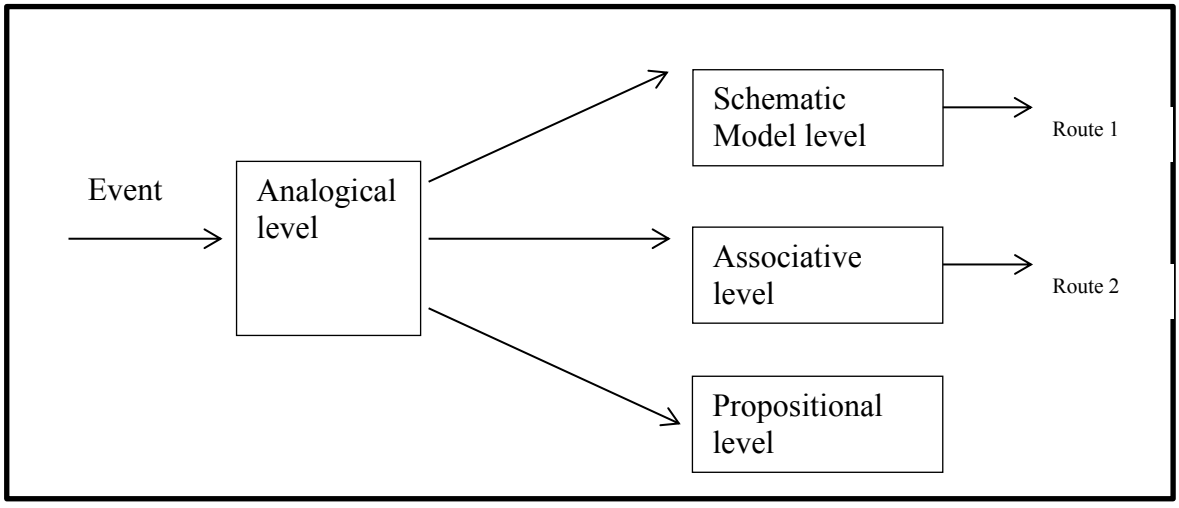


Figure 3: The SPAARS model (Taken from Power & Dalgleish, 1997).

2.4 The role of disgust in post-traumatic symptomatology and the SPAARS model

In the last few years, the relationship between disgust and post-traumatic symptomatology has received attention. Elevated levels of disgust have been observed in individuals with a diagnosis of PTSD (Finucane *et al*., 2012). Furthermore, women who have a history of CSA and resultant PTSD report significantly more disgust during recall of the incident, than those without PTSD (Shin *et al*., 1999). Nonetheless, ambiguity exists regarding the role of disgust. For example, Engelhard *et al*. (2010) examined disgust propensity (one aspect of the disgust trait) and found no association between propensity and PTSD symptoms. However, disgust sensitivity (a second aspect of the disgust trait) moderated the relationship between peri-traumatic disgust and PTSD-symptom severity. In Journal Article 1, the emotion profile of a population of survivors of CSA is examined to establish the particular emotions experienced by this population and explore the role of disgust. In addition, emotions experienced by this population are examined to see if they predict complex post-traumatic sequelae.

The empirical study outlined in the Journal Article 2 examines the presence of explicit and implicit disgust in a population of survivors of CSA, compared to individuals who have been referred to a psychology service who have no history of childhood trauma.

2.5 The implicit association test (IAT) and disgust

The SPAARS model (Power & Dalgleish, 2008) proposes an automatic route to the experience of emotion, and it argues that it is possible to be aware of the appraisals which underlie an emotion and simultaneously hold an unconscious interpretation of an event. Furthermore, conscious and unconscious appraisals can be conflicting. Complex emotional experiences or emotional disorders may be the result of conflicting emotions

and appraisals. In Study 2, an IAT is used to understand the influence of implicit (or unconscious) disgust self-concept on emotional disorder in a population of survivors of CSA.

The implicit association test (IAT; Greenwald *et al*., 1998) is a tool to measure implicit cognitions. Response latencies are measured as an individual makes judgments about the stimuli presented on screen. The IAT is based on the assumption that 'associations [between concepts] can be revealed by mapping two discrimination tasks alternately onto a single pair of response' (Greenwald *et al*., 1998, p. 1469). Discrimination categories are selected by participants pressing the assigned response key, e.g. one key might represent flower and pleasant, and another key might represent insect and unpleasant (Greenwald *et al*., 1998).

Reaction times are likely to be faster when a participant is presented with a subordinate target word which is congruent with one of the superordinate categories, e.g. rose (subordinate) is congruent with flower and pleasant (superordinate). However, when the converse superordinate categories are presented on either side of the screen, e.g. flower and unpleasant versus insect and pleasant (less associated categories), reaction times are likely to be slower (see Figure 4). Greenwald *et al.* (1998) argue that this demonstrates that, for most people, flowers are considered pleasant and insects unpleasant.

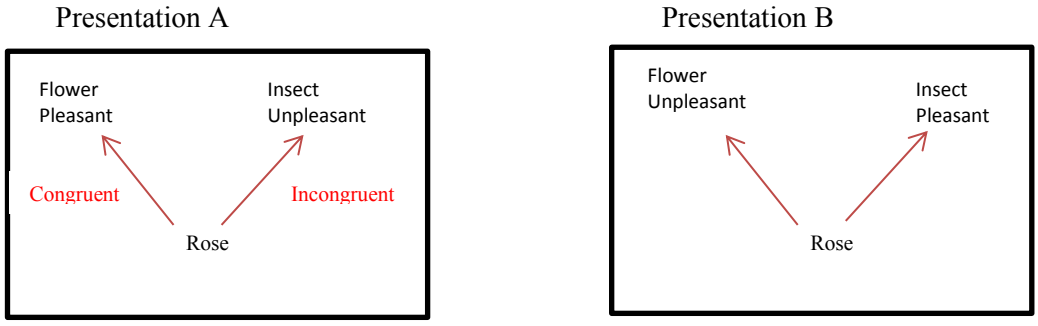


Figure 4: Superordinate categories-IAT presentation. Superordinate categories that are congruent with the target word are likely to result in faster response latencies (Presentation A), whereas less associated categories are likely to result in slower response latencies.

This task has been used to explore a range of implicit attitudes; for example, ethnic attitudes and race (Greenwald *et al*., 1998), body image (Juarascio *et al*., 2011) and disability (Vaughan & Doyle, 2007). Recently, the IAT has been used to examine emotion and self-concept. Rüsch *et al*. (2007) examined implicit self-concept in borderline personality disorder, and demonstrated that the IAT could be used successfully in a clinical population to assess implicit shame relative to anxiety.

The IAT used in Journal Article 2 is based on the same design, examining disgust self-concept relative to happiness. A recent article, published after the IAT in Journal Article 2 had been designed, also examines disgust self-concept. Rüsch *et al*. (2011) identified a relationship between post-traumatic symptoms and elevated levels of disgust in a population of individuals with a diagnosis of borderline personality disorder, using an implicit association test. The article highlighted the independence of an explicit disgust concept and an implicit disgust self-concept. These findings support the proposed schematic and associative routes outlined in the SPAARS model in a population of individuals with borderline personality disorder, with or without co-morbid PTSD, and healthy controls.

2.6 Acceptance and Commitment Therapy (ACT) processes; Cognitive fusion and Experiential avoidance

It is beyond the scope of this thesis to discuss the theoretical foundations of Acceptance and Commitment therapy processes (see Hayes, Barnes-Holmes, & Roche, 2001 for a review). In brief, ACT is a third wave cognitive behavioural therapy which posits that there are number of underlying behavioural processes which result in psychological inflexibility and consequently psychopathology (Batten & Hayes, 2005). One such process is termed experiential avoidance. Experiential avoidance is an emotion

regulation strategy whereby the individual attempts to suppress, avoid or alter the content of internal experiences. Previous research has shown that female survivors of CSA are more likely to use this strategy to deal with distressing thoughts and feelings (Marx & Sloan, 2002; Poluny & Follette, 1995). Furthermore, experiential avoidance is thought to mediate the relationship between a history of CSA and psychological difficulties (Marx & Sloan, 2002). A second process related psychological inflexibility is cognitive fusion. This term is used to refer to the tendency for individuals to become extremely caught up in their own thoughts, with the result that their thoughts exert undue influence over their behaviour (Hayes *et al.,* 1999). Strong attachment to the conceptualised self is closely related to the idea of cognitive fusion. The IAT in Journal Article 2 examines the association between disgust (relative to happiness) and self. It is hypothesised that cognitive fusion may be associated with such a task. High levels of implicit and explicit disgust are likely to have implications for how one regulates one's internal experiences. The relationship between experiential avoidance and implicit and explicit disgust will also be examined in Appendix 23.

2.7 Adult Attachment

Adult attachment is a further variable briefly examined in the additional results section of this thesis. It is also beyond the scope of this research project to examine attachment in detail. Attachment style reflects the long term dynamics of relationships (Bowlby, 1988). Bowlby's attachment theory postulates that children develop internal models of the self and others as a result of internalizing experiences with caregiver (Bowlby, 1988). As a result of experiences in childhood, these interactions form a prototype for later relationships. Attachment is therefore a highly relevant variable in a sample where individuals have experienced an interpersonal trauma in childhood. In this study, the relationship between attachment and implicit and explicit self-disgust will be explored.

It is acknowledged that attachment is likely to have wider implications for the experience of emotions and there is the potential for a range of hypotheses beyond those included in this thesis.

For the purpose of this research, adult attachment is understood in the context of Bartholomew and Horowitz's (1991) four category model which is developed from Bowlby's theory regarding internal working models of the self and others (Bartholomew & Horowitz, 1991; Bowlby, 1988). Bartholomew and Horowitz (1991) propose that an individual's attachment style reflects their beliefs about themselves and significant others (internal working models) and can be further dichotomised into positive and negative. They proposed four categories of attachment styles which reflect positive and negative belief's about oneself and significant others (See Figure 5).

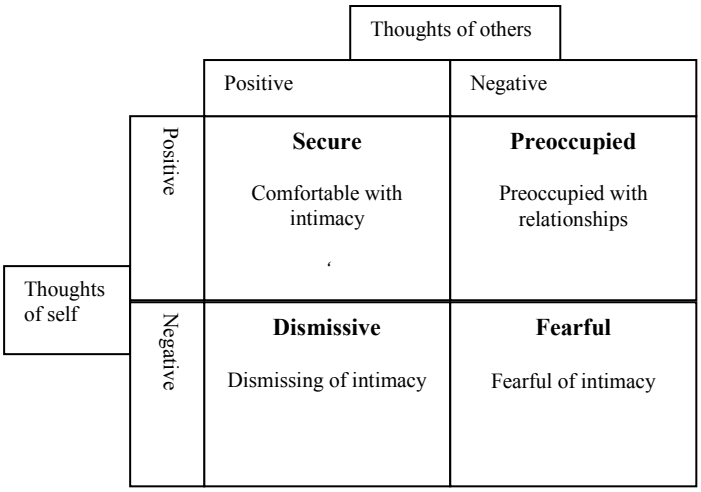


Figure 5: Four categories of attachment described by Bartholomew & Horowitz (1991).

This model provided the basis for the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) described in the methodology chapter. Self-model and other-model attachment dimensions can also be derived by combining ratings on each of the four styles above resulting in a negative self-model (anxious) or negative other model

(avoidant). Adult attachment in this study is explored in relation to implicit associations between self and disgust and explicit self-reported disgust.

2.8 Summary

One of the aims of this study is to gain a better understanding of the emotions which might underlie the psychopathology associated with complex trauma, such as CSA, using the SPAARS model as the theoretical foundation. This thesis attempts to explore emotion and psychopathology relating to CSA using explicit self-report measures and an IAT. The majority of studies examining symptoms and beliefs in clinical populations rely on self-report measures. One of the challenges of this is the bias introduced by participant self-presentation. One might hypothesise that concerns about self-presentation would particularly affect those participants presenting with high levels of shame or self-disgust. It is, therefore, hoped that the breadth of empirical approach in this thesis will help provide a more thorough understanding of the emotional experience of individuals who have experienced CSA and report post-traumatic sequelae.

EMPIRICAL STUDIES – HYPOTHESES

Study 1 – Main hypotheses:

- Survivors of CSA will display a distinct pattern of basic emotions which predict PTSD symptoms (Power & Dalgleish, 2008).

- Factor analyses will confirm the five basic emotions model structure in this population.

- Basic emotions will predict post-traumatic symptomatology and scores on the Clinical Outcomes in Routine Evaluation (CORE) measure.

Study 1 – Secondary hypotheses (reported in the additional results section):

- Higher levels of happiness will predict higher levels of functional regulatory strategies, and lower scores on symptom measures.

Study 2 – Main hypotheses:

- Higher levels of negative emotions and lower levels of happiness will be experienced by a clinical sample of survivors of CSA compared to a sample of participants with mental health difficulties who have not experienced childhood trauma. Furthermore, individuals who have experienced CSA will have more difficulty coping with emotions, experience more psychopathology and utilise less helpful emotional regulatory strategies.

- Individuals who have experienced CSA will demonstrate greater levels of an implicit disgust self-concept, than a clinical population who have not

experienced childhood sexual abuse. This will be evidenced by a stronger association between the self and disgust, as measured by response latencies on the IAT.

Study 2 – Secondary hypotheses (reported in Chapter 6 - additional results and Appendix 23):

- Implicit disgust self-concept and explicit self-reported disgust will be associated with higher levels of other negative emotions, emotion regulatory difficulties and psychopathology, as well as higher levels of cognitive fusion.

- Higher levels of anxious and avoidant attachment will be observed in the CSA group than the NCT group. Anxious and avoidant attachment styles will be associated with high levels of implicit self-disgust and explicit trait disgust.

CHAPTER 3: METHODOLOGY

This chapter explains the research approach adopted by this study. This study was conducted in two stages and, thus, this methodology chapter is in two parts: the procedure for Study 1 is outlined first, followed by the procedure for Study 2. The measures used and the computer task (IAT) designed are explored in more detail in this chapter, and information on the research setting, context and recruitment are also included.

3.1 Study 1

3.1.1 Design

A cross-sectional consecutive case series design was employed. The study utilised anonymous data, routinely collected from 109 individuals referred to a psychotherapy service for adult survivors of childhood sexual abuse. Mixed statistical methodologies were used to examine the data. In the first instance, descriptive statistics were used to identify the prevalence of PTSD symptoms, current distress and functioning at the point of referral in the population recruited.

An exploratory factor analysis of the Basic Emotions scale (BES) was conducted to identify patterns of basic emotions experienced by CSA survivors. The results of the factor analysis were used to guide the design and content of the computer task employed in Study 2. Subsequent statistical methods employed included correlation and regression analyses to investigate the relationships between the basic emotions, identified emotion regulation strategies, PTSD symptomatology and functioning.

3.1.2 Ethical approval

The Scientific Officer of the East of Scotland Research Ethics Service was consulted regarding the use of the anonymous, routinely collected, data used in Stage 1 of the study. The use of this data with permission from the custodian was approved (See Appendix 12).

3.1.3 Data collection

The Psychotherapy Department serves an urban area in the East of Scotland and offers psychoanalytic psychotherapy to individuals who have experienced childhood sexual abuse. Over a two year period, all individuals referred to the Psychotherapy Department were routinely sent a pack of measures with a covering letter (See Appendix 13). The anonymous return of these measures was deemed a satisfactory indication of consent. One hundred and nine individuals returned a completed pack of measures. This sample consisted of 15 men and 85 women (information regarding gender was missing for nine individuals). Participants were aged between 19 years and 60 years of age, with a mean age of 35.49 years (*SD*=9.89).

3.1.4 Materials

The following measures were posted to participants in Study 1.

***Basic Emotions Scale* (BES; Power, 2006):** is a three part questionnaire which assesses the basic emotions experienced over the previous week, in general, and one's ability to cope with each of twenty-one emotion terms listed, using a seven point Likert-type scale. The 21 emotion terms can be reduced to five subscales, which correspond to the five basic emotions (Anger, Sadness, Disgust, Fear and Happiness) as described by Oatley and Johnson-Laird (1987) and Power and Dalgleish (1997). Good internal

reliability and discriminant group validity have been indicated in a clinical sample of outpatients with anxiety and depression (Power & Tarsia, 2007).

The Regulation of Emotions Questionnaire **(Phillips & Power, 2007):** is a 21 item self-report measure originally designed to assess the frequency with which adolescents employ functional and dysfunctional strategies, utilising internal and external resources to manage their emotions. Participants were required to indicate, using a five point Likert scale, how often they use a list of emotion regulation strategies. The items map onto four subscales – external functional, external dysfunctional, internal functional and internal dysfunctional. The validity of this measure was supported in a study of adolescents. Sample items for each of the four subscales include the following: 'I harm or punish myself in some way' (Internal Dysfunctional), 'I review (re-think) my thoughts or beliefs' (Internal functional), 'I bully other people (e.g. saying nasty things to them or hitting them' (External dysfunctional) and 'I talk to someone about how I feel' (External functional).

The Clinical Outcomes in Routine Evaluation **(CORE-OM; Evans *et al*., 2000):** is a 34 item self-report measure with scores on four dimensions – subjective well-being, problems or symptoms experienced, social functioning and risk to self or others. Participants rate each of the 34 items on a five point scale (ranging from 'not at all' to 'most or all of the time'), indicating how they have felt over the last week. Evans *et al*., (2002) reports good internal consistency for all four dimensions (ranging from α=0.75 to α=0.95) across all domains, and good convergent validity with other standardised measures. With the exception of the risk domain, good test-retest reliability has been demonstrated (α=0.87–0.91). The stability of the risk domain has been reported as lower

(α=0.64) than that of the other subscales, this is attributed to the situational and reactive nature of the items in this dimension.

PTSD Checklist Civilian Version **(PCL-C; Weathers *et al*., 1993):** consists of 17 items which correspond to the DSM-IV diagnostic criteria for post-traumatic stress. Participants identify how often they have been troubled by each symptom in the last month on a five point scale. Psychometric data for the PCL-C was originally established from the military version of the scale in combat populations. This data indicated high internal consistency co-efficients for the total scale (α=0.97) and the subscales (α=0.92–0.93).

Recently, the sensitivity and specificity of the PCL-C has been questioned. It has been suggested that the cut-offs for a diagnosis of PTSD need to be adjusted with a more sensitive cut-off (below 44) required for estimating prevalence in clinical populations (Terhakopian *et al*., 2008).

3.1.5 Power and sample size

'The power of a statistical test is the probability that it will yield statistically significant results' where they exist, while avoiding Type I and II errors (Cohen, 1969, p. 1). Power calculations were conducted *a priori* for Stage 1 of the analysis.

For the regression analysis, the alpha (α) level was set at 0.05 with power of 0.80, in order to detect moderate strength effects in line with Cohen's recommendations. With nine predictor variables and one dependent variable, a sample size of 113 was recommended. By contrast, the use of Harris's (1985) equation, **N=50 + m** (**m** = the number of predictor variables), produced a recommendation of 59 participants (Harris, 1985; cited in Dancey & Reidy, 2007). Green (1991) gives another formula of **N=50 +**

8m (**m**=the number of predictor variables) to detect moderate or larger effects within a regression analysis, resulting in a recommended sample size of 122, for nine independent variables and one dependent variable. A sample size of 109 was deemed appropriate to proceed with regression analysis.

Recommendations for sample size when conducting a factor analysis are also varied, and tend to fall into two camps; those which are based on the minimum ratio of N to the number of variables, or those which state the minimum sample size. Tabachnick (2007) suggests a minimum of 300 cases, in contrast to Hair *et al*. (1995) who propose a minimum of 100 cases. Gorsuch (1983) suggests a ratio of five subjects per item, with a minimum of 100 items; whereas Sapnas and Zeller (2002) suggest that 50 cases may be an adequate sample size for factor analysis.

There is an evident lack of agreement with regard to sample size recommendations for factor analysis. For the purpose of this study, it was decided that a minimum sample size of 100 participants would be acceptable. It is acknowledged that this figure is well below some of the recommendations for factor analysis, particularly those which are based on a minimum ratio of cases to variables; however, 109 participants was an achievable figure within the current research context.

3.2 Study 2

3.2.1 Design

Study 2 employed a quantitative, cross-sectional, between groups design and utilised qualitative data collection. Ethical approval was originally sought for a cross-sectional design involving only a population of survivors of childhood sexual abuse. However, following difficulties with recruitment, an amendment was made to the design in

November 2011, which added a matched case control group, and qualitative data collection to the study. Matched controls also proved difficult to recruit, however, so in March 2012, the study design was amended once again to include a non-matched control group.

Participants were asked to complete a set of nine measures (including the four measures used in Study 1) and an implicit association test (Greenwald *et al*., 1998). As with Study 1, descriptive statistics were used to identify the prevalence of PTSD symptoms, current distress and functioning, with the addition of measures of dissociation, avoidance, cognitive fusion and attachment style in both groups. T-tests were used to examine the differences between groups on the measures. Correlational analysis was used to explore the relationships between implicit disgust (as measured by the IAT) and self-report measures. As the use of the IAT was a novel form of data collection in this field, upon completion participants were asked for qualitative feedback on their experience. This feedback was audio-recorded and transcribed, in order to inform the design of future studies in this area.

3.2.2 Ethical approval and issues

An application for ethical approval for Study 2 (which included details of Study 1) was made to the East of Scotland Research Ethics Committee. It was approved in April 2011 (See Appendix 8). The proposal was approved by the University of Edinburgh's Section of Clinical and Health Psychology Research Viability and Ethics process as a viable project.

3.2.2.1 Substantial amendment

Unfortunately, by November 2011, it became clear that it was not going to be feasible to recruit adequate numbers of participants for the cross-sectional design of Study 2 in the

given timescale. A substantial amendment to the study was deemed necessary. At the time of the initial application to the East of Scotland Research Ethics Committee, the proposal suggested that should there be difficulties with recruitment that an amendment would be submitted expanding recruitment of the CSA population beyond the local area. However, during the process of data collection, a number of sensitive disclosures made by participants to the researcher highlighted the importance of good relations with supporting health professionals. It was; therefore, felt that it would be inappropriate to pursue data collection in areas where local procedures and health professionals were less familiar to the primary researcher. Consequently, a substantial amendment was submitted proposing a change to the study design and expanding recruitment to other Mental Health Services within the local area only.

Participants were also recruited from two local voluntary agencies (See Appendix 10 & 11) with respective management approval. This followed a period of consultation with the voluntary agencies were relations and procedures were established so that any disclosure of risk by participants could be addressed appropriately.

3.2.2.2 Ethical considerations

Informed consent was gained prior to participation, and individuals were advised they could withdraw from the study at any time without having to give a reason (See Appendix 15). Participants were not contacted until at least 24 hours had passed since they were provided with a study information sheet by their healthcare worker. When the participant was contacted by phone, it was checked that they had taken the opportunity to read the information sheet prior to arranging an appointment. Frequently, appointments were arranged with participants at least two weeks in advance, providing ample time to withdraw if they wished.

A primary concern of the researcher was ensuring that the study did not cause undue psychological distress to participants. The participant information sheets did not use the term 'childhood sexual abuse', but instead used the phrase 'adverse childhood experiences' in the hope that this might be less emotive in terminology. In addition, the questionnaires and IAT did not ask directly about previous traumatic experiences, but were instead focused on present emotional experiences, symptoms and functioning.

Participants were only recruited to the study if they were referred by their healthcare professional/support worker; thus, ensuring that they had an established therapeutic relationship which could be accessed for support and further information. In addition, each participant's GP was informed by letter of their involvement in the study. Consent was sought by the primary researcher, rather than the referring clinician, to ensure that the participant did not feel coerced in any way because of their existing therapeutic relationship. Participants were asked if they would like a summary interpretation of their scores on the measures to be shared with their healthcare professional in order to inform therapy. The majority of participants availed of this and healthcare professionals in both the voluntary sector and psychology service reported finding this beneficial.

3.2.3 Recruitment

In the first instance, the primary researcher presented the rationale for the project at a variety of team meetings within the psychology department and local mental health team meetings. Local voluntary agencies were also contacted and the study was presented at team meetings within these agencies. These presentations provided opportunities for health care professionals to discuss and ask questions about the study. All of these meetings were followed up with email and telephone contact to further clarifying the recruitment procedure so that potential participants could be identified. Participant

information sheets were given to all relevant health professionals, so that they could be shared with potential participants on their caseload.

Potential participants were identified by their allocated psychologist within the Psychology Department, or by other health professionals (e.g. psychiatrists, community psychiatric nurses) within the Mental Health Service of the National Health Service (NHS) in a single geographical area in the East of Scotland. Participants recruited from the voluntary sector were identified by their counsellor/support worker within the voluntary agency in the same geographical area.

Initially, efforts focused on recruiting patients who had experienced childhood sexual abuse. Health professionals were asked to identify patients on their caseloads who had disclosed an experience of childhood sexual abuse. Cases that were not in active treatment were not included in the study due to ethical considerations, particularly with regard to the sensitive nature of the study topic. Health professionals provided the individuals with a copy of the participant information sheet and gained consent to pass the individual's contact details to the primary researcher.

Following the substantial amendment approval in November 2011, clinicians within the psychology service were contacted to request that they examine their caseload for any individuals who had not disclosed an experience of childhood trauma and could be matched on age, gender and total CORE score. Clinicians were asked to provide these individuals with a study information sheet. Unfortunately, only one individual was recruited following this process. Therefore, in March 2012, clinicians were asked to provide study information sheets to anyone on their caseload who identified themselves

as not having experienced childhood trauma, regardless of age, gender or total CORE score.

A total of six voluntary agencies were approached and informed about the study. Three of these agencies agreed to be involved in the study. All three agencies were independent organisations that provide free and confidential specialist support services to adult survivors of childhood sexual abuse. Counsellors or support workers within these agencies were asked to approach individuals on their caseload who met the inclusion criteria for the survivors of childhood sexual abuse sample (Table 8), and provide them with a participant information sheet.

Table 8: Study 2 inclusion and exclusion criteria.

INCLUSION CRITERIA	
Group 1: Survivors of childhood sexual abuse (CSA)	Group 2: Individuals who have not disclosed an experience of childhood trauma (NCT)
• Previously disclosed childhood sexual abuse	• No disclosure of childhood trauma • Identifies themselves as someone who has not experienced childhood trauma
• Currently engaged with support services (NHS psychology, mental health services or voluntary agency)	• Currently engaged with NHS psychology or adult mental health services
• Over 18 years of age	• Over 18 years of age
• Fluent in the English language	• Fluent in the English language
EXCLUSION CRITERIA	
Current suicidal intent or psychosis	

3.2.3.3 Issues with recruitment

Recruitment commenced following ethical approval in April 2011 and was completed in May 2012, following amendments to the study design. In total, 77 individuals were identified as wishing to participate and meeting the inclusion criteria for the study by their healthcare worker. Eight of these referrals no longer wished to participate when contacted by the primary researcher. Furthermore, 18 potential participants did not attend the arranged appointment slot (See Figure 6).

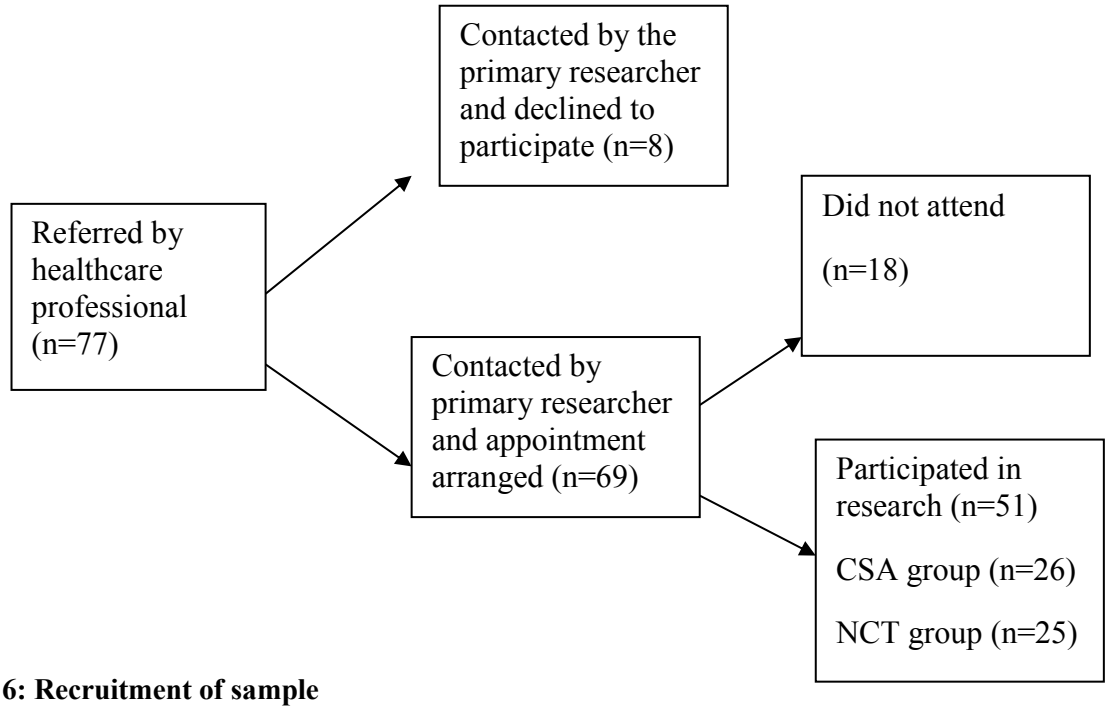


Figure 6: Recruitment of sample

It is acknowledged that the sample selected may not be fully representative because they are individuals identified by clinicians as being able to cope with involvement in a research study. As the study did not ask directly about trauma, it was not possible to gain information regarding the form of abuse, duration, age of onset or relation to the perpetrator. Information on presenting problem or engagement in therapy of the NCT group was not collected either.

Individuals who met the criteria for the NCT group were asked to indicate on the consent form if they had experienced an 'adverse childhood experience' which they had not disclosed to their referring health professional. It is possible that participants may not have identified with the term 'adverse childhood experience' and participated despite having experienced childhood trauma.

3.2.4 Procedure

After gaining consent, participants were asked to complete a brief IAT to assess implicit disgust self-concept (relative to happiness), followed by the set of nine questionnaires, and then approximately 10 minutes of debriefing discussion where participants were asked to provide feedback on their experience of participation in the study. On average, involvement in the study took 60 minutes.

3.2.4.1 Materials

The BES, REQ, PCL-C and CORE were presented, along with the measures discussed below. The order of presentation is outlined in Table 10.

EXPLICIT MEASURES

***Acceptance & Action Questionnaire II* (AAQ II; Bond *et al*., 2011):** is a 10 item questionnaire examining experiential avoidance – that is a person's ability to be in contact with their thoughts and feelings without attempting to avoid, suppress or change the content of these thoughts. Higher scores indicate higher levels of experiential avoidance. Participants are required to rate each of the 10 statements on a seven point Likert scale, ranging from 1=never true to 7=always true. Good construct validity has been established through a range of convergent, predictive and discriminate validity studies with other measures such as the Beck Anxiety Inventory (BAI; Beck & Steer, 1990), Beck Depression Inventory II (BDI-II; Beck, Steer & Brown, 1996 and the Global Severity Index of the Symptom Checklist 90 – Revised (SCL-90-R-GSI; DeRogatis, 1992).

***Cognitive Fusion-15 Questionnaire* (CFQ-15; Gillanders *et al*., 2010):** contains fifteen questions which have been developed to examine domains associated with cognitive

fusion (i.e. how closely one identifies with one's thoughts or internal experiences) and defusion. It contains items which relate to perspective taking, entanglement with one's thoughts, and believability of thoughts. Participants are required to rate statements according to 'how true' they believe them to be on a seven point Likert scale, ranging from 1=never true to 7=always true. Higher scores on this measure indicate a greater degree of cognitive fusion.

The measure has demonstrated good reliability (Cronbach's α=0.89 for fusion and 0.73 for defusion scales) in four separate community dwelling samples, as well as excellent test-retest reliability over a one month period (Fusion: r=0.82; Defusion r=0.84). Good reliability has also been demonstrated in clinical samples (with Cronbach α values ranging from 0.60–0.90). Correlation analyses with standardised measures of associated constructs, such as acceptance, mindfulness and rumination, have verified convergent validity.

Relationship Questionnaire **(RQ; Bartholomew & Horowitz, 1991)** This questionnaire measures four attachment styles ('secure', 'fearful', 'preoccupied' and 'dismissing'). Participants are asked to identify which attachment style they identify with the most. They are then asked to rate each of the attachment styles on a seven point Likert-type scale, according to the degree to which each style applies to them.

Bartholomew and Horowitz (1991) have suggested that the RQ has good reliability; however, some doubt has been cast on this by more recent studies (Leak & Parsons, 2001). Scharfe and Bartholomew (1994) have demonstrated that the questionnaire has moderate test-retest stability over eight months. The RQ has been found to have high concurrent validity and moderate levels of agreement with the classification of

attachment style identified in the Adult Attachment Scale (1985; Allen *et al.,* 2001; Griffin & Bartholomew, 1994).

The brevity of this questionnaire made it the most appropriate measure of attachment for the current study. The four attachment styles can be reduced to underlying attachment dimensions by combining the prototype dimensions. For the purpose of this study, anxious attachment calculated using the following equation '(secure + dismissing) - (fearful + preoccupied)' and avoidant attachment dimensions calculated as follows '(secure + preoccupied) - (fearful + dismissing)' were examined.

Dissociative Experiences Scale II **(DES II: Bernstein & Putnam, 1986)** is a 28 item self-report measure which is used to assess dissociative experiences. Participants are asked to rate, between 0% and 100%, how often a range of dissociative experiences occurs to them. For example, 'Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear. Circle a number to show what percentage of the time this happens to you.'

Meta-analytic validation of the DES II (van Ijzendoorn & Schuengel, 1996) has suggested that the measure has excellent convergent validity with other measures of dissociation and predictive validity (post-traumatic stress disorder: combined effect size d=0.75; N=1,099; and abuse: combined effect size d=0.52; N=2,108). It is also believed to have good validity and reliability (Carlson & Armstrong, 1994; Carlson & Putnam, 1993; Carlson *et al*., 1993); however, it has been suggested that the measure may be sensitive to response and experimenter biases. Van Ijzenhdoom and Schuengel (1996) recommend DES-II scores are averaged over a number of points in time.

***IMPLICIT MEASURE* – Implicit association test** (IAT; Greenwald *et al.,* 1998)

An implicit association test (IAT; Greenwald *et al.,* 1998) was designed and implemented using Eprime v2.0 software to gain understanding of implicit emotion-related self-concepts. Following the factor analysis conducted in Study 1, the emotion terms 'disgust' and 'happy' were felt to be the most pertinent implicit emotion self-concepts to examine (See Study 1) and used as superordinate categories in the task.

The central premise of the implicit association test is that stimuli are categorised more quickly when the target and superordinate pairings are consistent with the participant's automatic associations, rather than conflicting with their implicit associations. The design of this test is based on this assumption. The speed of response enables participants' 'implicit beliefs' to be identified, as respondents should be quicker when responding to a presentation that is consistent with their beliefs.

In this study, participants were required to classify emotion words (developed from the Basic Emotions Scale, happiness and disgust subscales) which appeared consecutively on screen into one of four superordinate categories, two of which appeared on the screen. The four superordinate categories used in the task were 'Self and happy', 'Self and disgust', 'Friend and happy' or 'Friend and disgust'. It follows that a participant who implicitly associates more strongly with disgust, rather than happiness, would respond more quickly when the response target word is from the disgust category, and one of the response keys is assigned to 'Self and disgust' as opposed to 'Friend and happy'.

If an individual experiences high levels of implicit self-disgust, they might be expected to respond during blocks where a response target word is from the disgust category (e.g.

shame) in a way that confirmed self-disgust and other- happy beliefs and denied self-happy and other disgust beliefs. This might be considered implicit disgust self-concept *congruent r*esponding. As blocks were alternated with reverse presentations (e.g. self-happy and friend-disgust appearing as superordinate categories), the same individual on these trials is likely to present with *incongruent* responding , i.e. confirming self-happy for a disgust target word, and denying friend and disgust as an appropriate superordinate category.

In summary, participants were required to respond in a way which was either congruent with an implicit disgust self-concept – whereby they associated disgust with themselves and happiness with friend – or congruent with an implicit happy self-concept – where they associated happiness with themselves and disgust with friend.

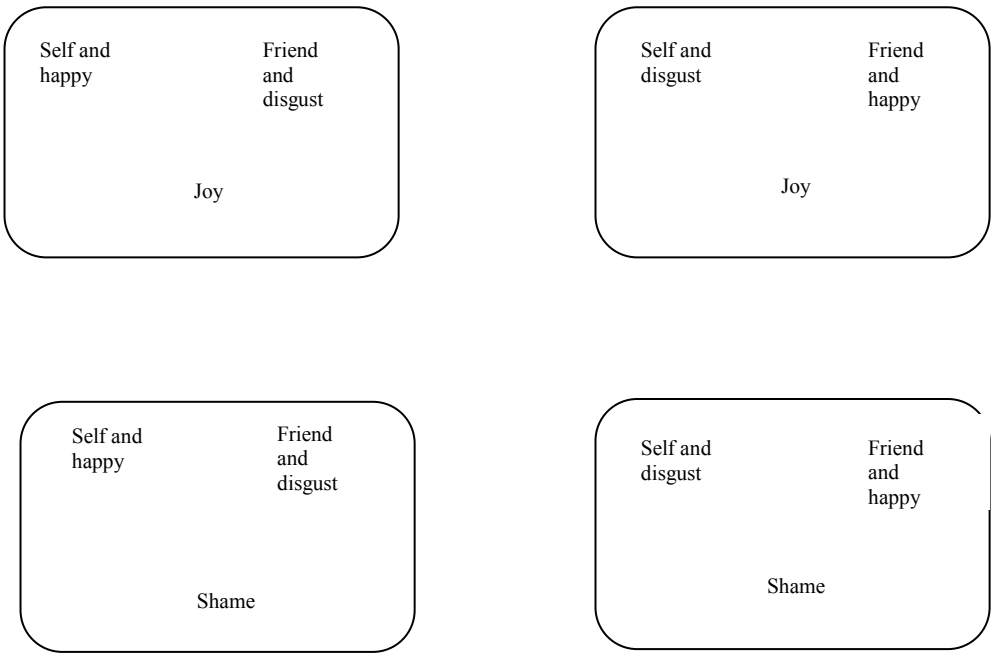


Figure 7: Four separate examples of possible views of the computer screen during a block of the implicit association test. Participants are required to classify each target word into the superordinate categories using either the 's' or 'l' keys. The target words are always presented in the bottom centre of the screen and the superordinate categories alternate between trials on the left and right hand corners of the screen. The next trial is presented following a key press and a new target word appears, the superordinate categories may also switch accordingly to randomisation.

There were a total of 24 trials and 12 target words presented in each block. Superordinate categories changed position on screen from left to right at random, and the order of target words presented also occurred at random. Prior to completing the two block presentation used in the analysis, participants were given the opportunity to complete two practice blocks, with assistance from the primary researcher. The first trial block required the participant to categorise a set of non-emotion words into superordinate categories of 'self' or 'best friend'. The second trial block presented target words relating to the anxiety and depression subscales of the BES and the superordinate categories were 'sad' and 'anxious'.

The IAT was administered on an NHS encrypted laptop. IAT data were analysed using the conventional scoring algorithm proposed by Greenwald *et al.* (1998) which results in an 'IAT effect measure' (Table 9). This measure represents the difference in reaction time between blocks. In this task, negative values represent a stronger association between self and disgust, and positive values indicate a stronger association between self and happy.

Table 9: Conventional Scoring algorithm for the implicit association test (Greenwald, *et al*., 2003).

Conventional IAT Scoring Algorithm
Use data from B4 & B7 (data from test blocks)
Non-systematic elimination of subjects for excessively slow responding and/or high error rates
Drop first two trials from each block
Recode latencies outside 300/3000 boundaries to the nearer boundary value
Log transform the resulting values
Average the resulting values for each of the two blocks
Compute the difference: B7-B4

Following the completion of these measures, participants were asked for feedback on their experience of participation. If participants consented, this feedback was recorded

and transcribed. Participants were informed that their feedback was being collected to improve future research in this area.

Table 10: Presentation of measures.

Order of materials presented
IAT
BES
REQ
PCL-C
CORE
AAQ-II
CFQ-15
DES-II
RQ
Negative Emotion Coupling Scale
Recording of responses to qualitative questions.

3.3 Statistical Analyses

3.3.1 Missing values

Missing values did not exceed 11% for Study 1 and 3.9% for Study 2. Missing values appeared were randomly distributed throughout the datasets. Imputation of the median value (MDI) was felt to be an appropriate method to address missing values in the data set. Median value imputation is often recommended over imputation of the mean because the mean is affected by outliers (Acuna & Rodriguez, 2004). As the data in Study 2 were skewed, it was felt to be a more appropriate method than mean value imputation.

Analyses

Data were analysed using the IBM Statistical Package for the Social Sciences (SPSS), version 19 for Windows. The strategy of the analyses and the results for each stage are provided below. For both sets of data, missing values and parametric assumptions

analyses were conducted for all variables in the first instance. Descriptive statistics were used to examine the characteristics of the sample.

Study 1

Exploratory factor analysis was conducted to examine the properties of the BES and the emotion profile of a population of survivors of childhood sexual abuse. Multiple regression was conducted to examine the predictive effects of the five emotion subscales of the BES, and the four emotion regulation subscales for PCL-C and CORE scores.

Study 2

IAT effect measure scores were calculated using the conventional scoring algorithm (Greenwald, *et al*., 2003). T-tests were used to examine differences between the groups on all measures including the IAT. Pearsons correlations were used to examine the relationship between implicit disgust self-concept, explicit self-reported disgust and psychopathology.

CHAPTER 4: JOURNAL ARTICLE 1

4.1 Title Page

Basic Emotions in a population of survivors of Childhood Sexual Abuse and predictors of psychopathology.

Short title for running head: Basic Emotions, psychopathology and CSA

(This has been written in accordance with the submission guidelines for, *Clinical Psychology and Psychotherapy*, see Appendix 2)

Author: Eimear McKay [1,2]
[1] Clinical and Health Psychology, University of Edinburgh, UK
[2] Clinical Psychology Dept, NHS Fife, UK
Word Count (excluding references):6873

Address for correspondence: Eimear McKay

NHS Fife Clinical Psychology Dept, Lynebank Hospital, Dunfermline KY11 4UW

(Email: eimearmckay@nhs.net, Tel: +44 (0)1383 565403)

4.2 Abstract

Introduction: The study was designed to examine the self-reported emotional profile of a population of survivors of childhood sexual abuse (CSA). Furthermore, the study aimed to investigate the relationship between the emotions experienced, emotion regulation strategies and psychological symptoms.

Method: The study employed a cross-sectional consecutive case series design, whereby 109 individuals referred to a psychotherapy department were asked to complete a set of measures; these included the Basic Emotions Scale (BES) –Weekly, General and Coping versions, Regulation of Emotion Questionnaire (REQ), Post-traumatic Symptom Scale – Civilian Version (PCL-C) and the Clinical Outcomes in Routine Evaluation Questionnaire (CORE).

Findings: Factor analyses supported the structure of the BES – Weekly, General, and Coping scales in a population of survivors of childhood sexual abuse. In all three versions of the scale, disgust explained the largest proportion of variance, followed by happiness. Regression analyses revealed that sadness, fear, disgust and external dysfunctional coping strategies predicted global post-traumatic stress disorder (PTSD) symptomatology and re-experiencing. Global distress, as measured by the CORE, was predicted by the emotions of sadness, disgust and low happiness, as well as dysfunctional regulatory strategies.

Conclusion: The findings support the five basic emotion structure proposed by the Schematic, Propositional, Analogue Representational System (SPAARS) model. The study demonstrates the utility of the profiling of basic emotions in understanding the

associations between emotional experience and psychopathology of a clinical sample of CSA survivors.

Key Practitioner Message:

- Disgust explains the largest amount of variance in the emotional profile of a CSA sample.
- Sadness, fear, disgust and external dysfunctional coping strategies predicted global PTSD symptomatology
- Consideration of the emotional profile of this population might be helpful in guiding treatment approaches.

Keywords: Childhood Sexual Abuse, Basic Emotions, PTSD.

4.3 Introduction

Childhood sexual abuse (CSA) is considered a "complex trauma". It involves an interpersonal betrayal of trust, often in primary relationships, during critical developmental periods. This has the potential to compromise the socio-emotional development of the victim resulting in an increased vulnerability to difficulties in regulating emotions, attachment and one's sense of self (Courtois & Ford, 2009). CSA has been recognised as a substantial risk factor for psychopathology, even when other childhood adversities have been controlled for (Molnar, Buka, & Kessler, 2001). Indeed, a range of psychological difficulties and disorders have been associated with CSA; including, anxiety disorders, post-traumatic stress disorder (PTSD), depressive disorders and personality disorders (Spataro, Mullen, Burgess, Wells, & Moss, 2004).

In the last 15 years, there has been an increased interest in the experience of everyday emotions and their relationship with psychopathology (Carolan & Power, 2011; Fox & Froom, 2009; Power, 2006; Power & Dalgleish, 1997; Power & Tarsia, 2007). This increase follows a long history of debate regarding the nature of emotion. Functionalist accounts of emotion suggest that "basic emotions" underlie emotional experience and related behaviour (Ekman, 1992; Oatley & Johnson-Laird, 1987). A basic group of emotions has been proposed which includes anger, disgust, anxiety, happiness and sadness (Oatley & Johnson-Laird, 1987; Power & Dalgleish, 1997).

Power (2006) found confirmatory evidence for the proposed set of five emotions, in a study involving a student sample who completed the Basic Emotions Scale (BES; Power, 2006). The study also provided support for a model of emotions known as the Schematic

Propositional Analogical Associative Representation Systems (SPAARS) model. It is beyond the scope of this article to discuss the SPAARS model in detail (see Power & Dalgleish, 1997 and Chapter 2 of this thesis). In summary, the SPAARS model proposes that each basic emotion is linked to an appraisal of an event, and the emotion triggered by the appraisal signals the individual into action.

SPAARS is a multilevel model; emotion-related stimuli are processed by the analogical system, the output from this system is then processed, in parallel, by either the associative (automatic emotion processing), schematic (processing requires effortful appraisal) or the propositional system (which indirectly operates via connection with the schematic and associative levels). Emotional profiles can be shaped by feedback loops which develop either between or within basic emotion modules. Furthermore, the SPAARS model proposes that emotional disorder can be understood to be the result of the coupling of basic emotions, or processing levels, within the same emotion (e.g. associative and schematic levels). For example, the coupling of sadness and disgust is thought to underlie depression (Power & Dalgleish, 2008).

Fox and Harrison (2008) examined the coupling of emotions in eating psychopathology. They concluded that the emotions of disgust and anger are likely to be coupled in bulimic pathology. The finding that psychopathology can be predicted by basic emotions has been supported by subsequent studies (Carolan & Power, 2011; Overton, Markland, Taggart, Bagshaw, & Simpson, 2008). Of interest to this study are the emotions which may underlie psychopathology in survivors of childhood sexual abuse. PTSD has been associated with CSA; however, several theorists have proposed that the current DSM-IV criteria for PTSD does not account for the full complexity of post-traumatic symptomatology observed in

survivors of CSA. Disorders of extreme stress not otherwise specified (DESNOS) or *complex trauma* have been suggested as separate nosological entities from PTSD (Courtois & Ford, 2009; Herman, 1992). The SPAARS model suggests that emotion coupling of fear and disgust underlies PTSD (Power & Dalgleish, 2008). The current study seeks to explore whether there is a more complex or different emotional picture underlying PTSD which is associated with CSA, in keeping with the idea that a more complex range of post-traumatic symptoms is experienced.

The SPAARS model proposes that the basis of PTSD is the cognitive system's inability to resolve inconsistencies between trauma-related information and the content of pre-existing mental representations (Dalgleish & Power, 2004). This discrepancy is thought to result in the PTSD symptom pattern of re-experiencing and avoidance of trauma-related information due to threat-based appraisals, with fear being the dominant emotion. Furthermore, Dalgleish and Power (2004) argue for a theoretical model of PTSD consisting of emotion specific (disgust and fear) and emotion non-specific components (avoidance and re-experiencing). They suggest that there might be a family of PTSD-like psychological reactions to extreme events which share emotion non-specific components (re-experiencing and avoidance), but differ in terms of their emotion specific component (emotions other than fear); for example, complex grief. It is, therefore, possible that the interpersonal nature of CSA-related trauma might result in different appraisals and different emotion specific components, whilst retaining the non-emotion specific components (e.g. the symptoms of re-experiencing and avoidance). This study will explore the emotion specific component underlying PTSD in this sample. Furthermore, the emotions underlying general psychopathology in this sample of survivors of CSA will also be explored.

Prior to examining the emotion predictors of PTSD, the specific emotion profile of CSA survivors in this sample will be established. The study will use exploratory factor analysis to build upon the existing literature for the factor structure of the BES scale and evidence the emotional profile of this sample. Recent research has examined the basic emotion profiles of a group of individuals diagnosed with PTSD (Finucane, Dima, Ferreira, & Halvorsen, 2012). The PTSD group experienced negative emotions more frequently than the other groups and was discriminated from healthy, chronic pain and depressed groups by their experience of disgust (Finucane et al., 2012). It is hypothesised that the CSA group in this study will also experience high levels of negative emotions, as well as high levels of PTSD symptoms.

The role of emotion regulation in predicting post-traumatic symptomatology will also be explored. Difficulties regulating emotions are a primary criterion in the proposed diagnostic criteria for complex PTSD/DESNOS (Herman, 1992). The contribution of emotion regulation difficulties to a model of emotion which predicts post-traumatic and general psychopathology will therefore be investigated.

In summary, the purpose of this study is to consider how emotions might be involved in the presentation of individuals who have experienced childhood sexual abuse. The study will assess the emotion states that occur in a population of survivors of CSA. The study will examine the contributory effects of the five basic emotions and emotion regulatory strategies to the presentation of general and post-traumatic symptomatology in a population of survivors of CSA.

Specifically, three hypotheses will be examined:

Hypothesis 1: The CSA sample in this study will experience high levels of negative emotions; in particular, disgust is likely to be frequently experienced by this sample (Finucane et al., 2012; Power & Dalgleish, 2008).

Hypothesis 2: Factor analyses of the BES – Weekly, General and Coping scales will support the five basic emotions model proposed by Power and Dalgleish (2008).

Hypothesis 3: Basic emotions will predict post-traumatic symptomatology and scores on the CORE.

4.4 Method

4.4.1. Design

The study utilised a quantitative cross-sectional consecutive case series design. Anonymous data were routinely collected, at the point of referral, from 106 individuals referred to a psychotherapy service specialising in the treatment of adult survivors of childhood sexual abuse. Individuals were routinely sent a pack of measures with a covering letter (See Appendices 13 and 14). The anonymous return of these measures was deemed a satisfactory indication of consent.

4.4.2 Measures

The following measures were included:

Basic Emotions Scale **(BES; Power, 2006):** is a three part questionnaire which assesses basic emotions experienced over the last week (state emotions) and in general (trait

emotions), and one's ability to cope with each of the 21 emotion terms listed using a seven point Likert scale. The 21 emotion terms can be reduced to five subscales, which correspond to the five basic emotions (Anger, Sadness, Disgust, Fear and Happiness) as described by Oatley and Johnson-Laird (1987) and Power and Dalgleish (1997). Good internal reliability and discriminant group validity have been indicated in a clinical sample of outpatients with anxiety and depression (Power & Tarsia, 2007).

The Regulation of Emotions Questionnaire **(Phillips & Power, 2007):** is a 21 item self-report measure originally designed to assess the frequency with which adolescents employ functional and dysfunctional strategies, utilising internal and external resources to manage their emotions. Participants are required to indicate, using a five point Likert scale, how often they use a list of emotion regulation strategies. The items map onto four subscales – external functional, external dysfunctional, internal functional and internal dysfunctional. The validity of this measure was supported in a study of adolescents. Sample items for each of the four subscales include the following: "I harm or punish myself in some way" (Internal Dysfunctional), "I review (re-think) my thoughts or beliefs" (Internal functional), "I bully other people (e.g. saying nasty things to them or hitting them" (External dysfunctional) and "I talk to someone about how I feel" (External functional).

The Clinical Outcomes in Routine Evaluation **(CORE-OM; Evans et al., 2000):** is a 34 item self-report measure with scores on four dimensions – subjective well-being, problems or symptoms experienced, social functioning and risk to self or others. Participants rate each of the thirty-four items on a five point scale (ranging from "not at all" to "most or all of the time"), indicating how they have felt over the last week. Evans (2002) reports good internal consistency for all four dimensions (ranging from α=0.75 to α=0.95) across all domains, and

good convergent validity with other standardised measures. With the exception of the risk domain, good test-retest reliability has been demonstrated (α=0.87–0.91). The stability of the risk domain has been reported as lower than the stability for other subscales (α=0.64), this is attributed to the situational and reactive nature of the items in this dimension.

PTSD Checklist Civilian Version **(PCL-C; Weathers, Litz, Herman, Huska, & Keane, 1993):** consists of 17 items which correspond to the DSM-IV diagnostic criteria for post-traumatic stress. Participants identify how often they have been troubled by each symptom in the last month on a five point scale. Psychometric data on the scale was originally established using the military version of the scale. This data indicated high internal consistency co-efficients for the total scale (α=0.97) and the subscales (α=0.92–0.93).

4.4.3 Data Analysis

Data were analysed using IBM SPSS Statistics version 19 for Windows. Means and standard deviations were calculated for all continuous variables; frequencies and percentages were calculated for categorical variables. Imputation of the median value was used to address missing values which were randomly distributed throughout the dataset and did not exceed 11%. An exploratory factor analysis of the Basic Emotions Scale was conducted to identify patterns of basic emotions experienced by CSA survivors. Subsequent statistical methods employed included correlation (See Chapter 6) and regression analyses. Regression analyses were used to investigate the predictors of trauma symptomatology for each of the PCL-C subscales, total PCL-C score and CORE subscales. Predictor variables were subscales of the BES Weekly, General and Regulation of Emotions subscales. Correlations were conducted on the Regulation of Emotions subscales (internal functional, internal dysfunctional, external functional and external dysfunctional), with the CORE and

the PCL-C to examine the associations between regulation strategies and symptoms/functioning.

4.5 Results

Emotion and Psychopathology

Tables 11 and 12 present data on the characteristics of the population including scores on emotion and symptom measures. The results of the analysis are presented for each hypothesis separately.

Table 11: Demographic and population characteristics.

Factor	Level/units	n= 109 Mean or N (sd or %)
Age		35.5 (9.9)
Gender	Males	15 (13.8%)
	Females	85 (78%)
	Missing values	9 (8.3%)
Education	Basic education	42 (38.5%)
	Higher education	70 (45.8%)
	Missing values	17 (15.6%)
Employment	Full/part-time	40 (36.7%)
	Unemployed/retired/other	63 (57.8%)
	Missing values	6 (5.5%)
Marital status	Married/cohabiting	37 (35.0%)
	Divorced/single	65 (59.6%)
	Missing values	7 (6.4%)
Living arrangements	Alone	37 (33.9%)
	With others	66 (60.6%)
	Missing values	6 (5.5%)

Table 12: Means (sd's) of emotion-related measures administered.

Emotion measure	Mean (sd)	Symptom measure	Mean (sd)
BES – Weekly		**PCL**	
Anger	4.67(1.2)		
Sad	4.63(1.3)	Re-experience (Criterion B)	18.2 (5)
Disgust	4.64(1.6)	Avoidance (Criterion C)	25.6 (5.9)
Fear	5.51(1.1)	Hyperarousal (Criterion D)	18.1 (4.3)
Happy	3.25(1.2)	Total	61.9 (13.4)
BES –General			
Anger	4.93(1.2)		
Sad	4.78(1.3)	**CORE**	
Disgust	4.77(1.6)	Subjective well-being	3.0 (0.7)
Fear	5.70(1.0)	Problems/symptoms	2.9 (0.8)
Happy	3.50(1.3)	Functioning	2.4 (0.7)
BES – Coping		Risk	1.3 (0.9)
Anger	4.97(1.2)	Global distress	2.5 (0.7)
Sad	5.12(1.1)	Non-risk items	2.7(0.7)
Disgust	5.31(1.2)		
Fear	5.50 (1.0)		
Happy	3.33 (1.5)		
REQ			
External functional	2.30 (0.8)		
Internal functional	2.50 (0.7)		
External dysfunctional	2.10(0.9)		
Internal dysfunctional	3.5 (0.7)		

Internal consistency

Cronbach's alpha was conducted for each of the BES scales and their five emotion subscales. The values are outlined in Table 13 below:

Table 13: Cronbach's alpha for each of the BES 21 item scales and their respective subscales.

Cronbach's alpha	BES Weekly	BES General	BES Coping
Total scale (21 items)	0.86	0.87	0.89
Subscale			
Anger	0.67	0.76	0.73
Sad	0.78	0.76	0.78
Disgust	0.88	0.89	0.85
Fear	0.77	0.84	0.82
Happy	0.84	0.91	0.90

With the exception of BES Weekly Anger, Cronbach's alpha on the BES Weekly, General and Coping questionnaires, and their subscales, all exceeded 0.70; indicating excellent internal consistency and reliability (Kline, 1999). The BES Weekly Anger subscale was not included in the one way repeated measures Analysis of Variance, correlation or regression analyses. Cronbach's alpha was also calculated for the three additional scales and the four subscales of the REQ. With the exception of the REQ internal functional and REQ internal dysfunctional scales, the values all exceeded 0.70. The REQ internal functional and dysfunctional were excluded from the analysis due to the Cronbach's alpha scores for these measures (See Table 14).

Table 14: Cronbach's alpha for the REQ subscales, CORE and PCL-C.

Measure	Number of items in scale	Cronbach's alpha
REQ total	21	0.70
External functional	6	0.79
Internal functional	5	0.66
External dysfunctional	5	0.86
Internal dysfunctional	5	0.62
CORE	34	0.93
PCL-C	17	0.90

Power: For the regression analysis, the alpha (α) level was set at 0.05 with a power of 0.80 to detect moderate strength effects, in line with Cohen's recommendations (Cohen, 1988). With nine predictor variables and one dependent variable, a sample size of 113 was recommended. It is acknowledged that a sample size of 109 falls slightly short of this recommendation for multiple regression analyses; therefore, interpretation of the results should be cautious.

Hypothesis 1: The CSA sample in this study will experience high levels of negative emotions; in particular, disgust is likely to be frequently experienced by this sample. (Power & Dalgleish, 2008).

One-way repeated measures Analysis of Variance (ANOVA) were conducted to assess for significant differences between the emotion subscales for the BES-Weekly and general scales.

For the BES-Weekly, the results demonstrate a significant difference between scores on the emotion subscales. Mauchley's test was significant indicating that the assumption of sphericity had been violated ($x^2(9) = .438$, $p = <0.005$). Degrees of freedom were corrected using Greenhouse Geisser estimates of sphericity. The results demonstrated a significant difference between the frequency of experience of the basic emotions reported ($F = (2.70, 291.60) = 71.25$, $p = <0.0005$, $\dot{\eta}^2 = 0.39$). Post hoc tests using the Bonferroni correction demonstrated that significantly higher levels of disgust (23.22 ± 8.31) were reported ($p = <0.005$) than all other emotions on the weekly version of the BES.

Identical analysis was conducted for the BES-general scale. Again, Mauchley's test was significant indicating that the assumption of sphericity had been violated ($x^2(9) = .378$, $p = <0.005$) and degrees of freedom were therefore corrected with Greenhouse Geisser estimates of sphericity. For the BES-general scale, a significant difference was found for the of the five basic emotions subscales ($F = (2.59, 280.23) = 65.88$, $p = <0.0005$, $\dot{\eta}^2 = 0.37$). Post hoc tests using the Bonferroni correction demonstrated that the sample reported significantly higher levels of disgust (23.85± 8.01) and lower levels of happiness (14.0± 5.33) than all any of the other four subscales ($p = <0.005$).

It appears that the frequency of negative emotions and in particular the emotion of disgust on the BES Weekly and General subscales are not only high within this sample compared to happiness, but also when compared with the mean scores of populations from a previous study (Power & Tarsia, 2007). The mean score for fear on BES Weekly and General scales was also high, although not as high as the mixed anxiety and depression group on the weekly scale, or the mixed and anxious groups on the general scale in the Power and Tarsia (2007) sample (See Figure 8). Interestingly, the CSA group score higher than the groups from the other studies on disgust, general anger and sadness. They also score higher on happiness than the depressed group on both scales.

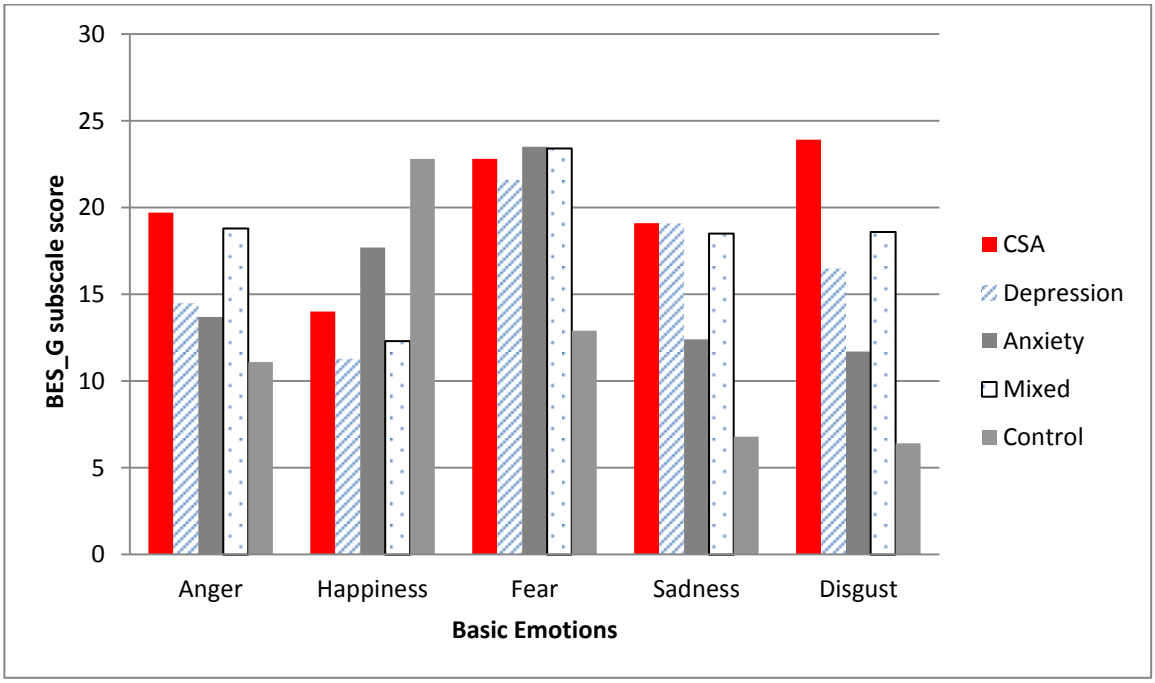


Figure 8: Mean Basic Emotions Scale General (BES_G) subscale scores (for the five basic emotions between the CSA group from the current study and the depression, anxiety, mixed and control groups from Power and Tarsia's (2007) study).

- **Hypothesis 2: Factor analyses will confirm the five basic emotions model structure in this population (Power & Dalgleish, 2008)**

Factor analyses were conducted using all three versions of the Basic Emotions Scale to examine the emotion profile of the population of survivors of CSA. The sample is sufficiently large to provide a participant-to-factor ratio greater than 20:1 (this was checked by running an initial analysis) and a 2:1 participant to variable structure that is recommended to produce a clear and stable factor structure (Arrindel & van Der Ende, 1985; Kline, 1993).

A principal components analyses (PCA) with varimax rotation was conducted on each of the three Basic Emotion Scales. PCA is a statistical technique which aims to reduce variables into a smaller number of summary factors whilst attempting to retain as much of the variance from the original variables as possible. The factors are established by a mathematical formula based on linear relationships between variables, which "load" items onto the factor that they most strongly correlate with. Higher factor loadings, therefore, represent a higher correlation between the item and the summary factor. Factors are subsequently rotated to transform the data into uncorrelated independent factors, and it is these rotated factors that are interpreted (Kline, 1993). Varimax rotation results in a small number of large loadings and a large number of small loadings, which simplifies the interpretation (Kline, 1993).

An eigenvalue (the sum of the squared factor loadings) greater than 1 was used to extract the factors. Factor loadings above 0.3 (explaining a variance of 9%) have been considered enough to deem the factor loading as salient (Kline, 1993). Upon examination of the factor

loadings in this study, a cut-off of 0.5 (25% of the variance on an item shared with the factor) was initially decided to be an appropriate level; although this might be considered rigorous and above the usual recommendations, it appeared to offer a clear factor structure in the dataset (Kline, 1993).

Descriptive statistics (See Table 12) and distributions were first examined for each of the three versions of the Basic Emotions Scale (weekly, general and coping) individually. Examination of normality plots and calculations of skewness and kurtosis revealed that data on all three scales were normally distributed. The three BES scales each met the requirements of interval level measurement and normal distribution required for exploratory factor analysis. All items on each of the three scales were included in their respective analysis. Keiser–Meyer–Olkin (KMO) measure of sampling adequacy was used to determine whether the sample used was large enough. A sample is considered adequate if the KMO value exceeds 0.5. The KMO value for the BES –Weekly was 0.76, General was 0.83 and Coping was 0.78.

Preliminary analysis and diagnostic tests:

Variables should be correlated, but not correlate too highly in factor analysis, in order to determine the contribution of variables to a factor. Bartlett's test of sphericity can be used to examine correlation, a significant value on this test indicates adequate correlation between variables (Field, 2005). Bartlett's test of sphericity was significant for all three scales (See Table 15).

Table 15: Bartlett's test of sphericity

Barlett's test of sphericity	
BES Weekly	(x^2 (210) =1188.29, p<0.001)
BES General	(x^2 (210) =1414.64, p<0.001)
BES Coping	(x^2 (210) =1317.17, p<0.001)

The Anti-Image Correlation Matrix was also examined. The diagonals of the anti-image correlation matrix on all three scales were over 0.5, and the majority of off-diagonal values were closer to zero; supporting the inclusion of each item on their respective scales in the analysis. Furthermore, examination of the communalities on each of the three scales revealed that they were all above 0.3, providing further confirmation that each item shared common variance with other items.

Multicollinearity can also be detected via the determinant of the correlation matrix if it is lower than 0.00001. On all three scales the determinant was greater than this value, indicating no evidence of multicollinearity (Field, 2005).

The subscale reliability analyses demonstrated that all five subscales had good Cronbach's alpha scores (See Table 13). Exploratory factor analyses were carried out using the IBM Statistics 19 programme for all three versions of the BES scale (weekly, general and coping).

Exploratory Factor Analysis (EFA) – BES Weekly

Principal components extraction with varimax rotation of the 21 items measure resulted in the extraction of five components (See Table 16), which had eigenvalues of 6.74, 2.82, 1.76, 1.24 and 1.13, respectively. All of these values exceeded the proposed minimum eigenvalue

value of 1.0. Examination of the screen plot of eigenvalues supported the retention of the five factors. Deeming all factor loadings that were over 0.50 as significant gave a five factor structure, which confirmed the factor structure of the Basic Emotions Scale. However, the "frustration" item did not load on any of the factors at this level, but loaded on the "fear" factor at (0.362). Reducing the acceptable factor loading significance level to 0.3 meant that "despair" cross loaded on the "fear" and "sadness" factors. Factor 1 (Disgust) accounted for 32.20% of the variance followed by Factor 2 (Happiness) which accounted for 13.45%; Factor 3 (Fear) also accounted for a high proportion of variance (8.41%).

Table 16: Item loadings on each factor of the Basic Emotions Scale Weekly after varimax rotation.

Item	F1 (Disgust)	F2 (Happiness)	F3 (Fear)	F4(Sadness)	F5 (Anger)
Anger	.055	-.007	.161	.361	**.714**
Despair	.268	-.056	**.402**	**.504**	.175
Shame	**.784**	.005	.223	.207	.211
Anxiety	.198	-.056	**.747**	.235	.051
Happiness	-.049	**.805**	-.235	-.020	.023
Frustration	.237	.185	**.362**	.106	.225
Misery	.234	-.105	.229	**.794**	.082
Guilt	**.790**	-.033	.320	.203	.051
Nervousness	.168	.002	**.697**	.244	-.116
Joy	.063	**.852**	-.161	.093	.097
Irritation	.296	.005	.176	-.198	**.732**
Gloominess	.258	-.160	.127	**.629**	.314
Humiliated	**.708**	.079	.048	.189	.292
Tense	.079	-.124	**.786**	-.050	.255
Loving	-.039	**.775**	.185	-.067	-.196
Aggression	.225	.003	-.062	.299	**.741**
Mournful	.406	.150	.251	**.580**	.030
Blameworthy	**.798**	-.108	.242	.108	.029
Worried	.307	-.074	**.583**	.212	.032
Cheerful	-.088	**.856**	.056	-.174	.053
Disgust (i.e. repulsion)	**.666**	-.143	.130	.323	.266
% of variance	32.20%	13.45%	8.41%	5.92%	5.29%
Cumulative variance %	32.20%	45.65%	54.07%	59.99%	65.29%

Items with a factor loading ≥ 0.3 are shown in bold type.

Exploratory Factor Analysis (EFA) – BES General

Five components were also extracted on this scale, with eigenvalues of 7.60, 3.09, 1.70, 1.44, and 1.04; accounting for 70.85% of the variance cumulatively. Consistent with the findings of the EFA of the BES Weekly, "disgust" was identified as the factor accounting for the most variance (36.19%). The "despair" and "frustration" items loaded on the "fear" subscale, which differs from the original scale construction of the BES (See Table 17).

Table 17: Item loadings on each factor of the Basic Emotions Scale General after varimax rotation.

Item	F1 (Disgust)	F2 (Happiness)	F3 (Fear)	F4(Anger)	F5(Sadness)
Anger	.211	-.065	.159	**.781**	.223
Despair	.320	-.076	**.412**	.243	.359
Shame	**.827**	.020	.265	.166	.035
Anxiety	.285	-.107	**.748**	.010	.258
Happiness	-.081	**.892**	-.167	-.008	-.031
Frustration	.168	.066	**.678**	.324	.078
Misery	.184	-.064	.267	.215	**.743**
Guilt	**.773**	-.048	.197	.183	.284
Nervousness	.203	-.167	**.621**	-.063	.383
Joy	.062	**.913**	-.085	.001	-.069
Irritation	.109	.091	.147	**.801**	.202
Gloominess	.171	-.147	.207	.236	**.729**
Humiliated	**.746**	-.113	-.017	.174	.258
Tense	.006	-.160	**.834**	.185	.001
Loving	-.084	**.849**	-.010	-.026	.065
Aggression	.314	-.097	.088	**.760**	.037
Mournful	.415	.079	.161	.073	**.603**
Blameworthy	**.739**	-.063	.189	.136	.306
Worried	.331	-.032	**.676**	.071	.344
Cheerful	-.140	**.889**	-.046	-.038	-.164
Disgust (i.e. repulsion)	**.803**	-.133	.270	.181	.040
% of variance	36.19%	14.72%	8.12%	6.85%	4.95%
%Cumulative variance	36.19%	50.91%	59.04%	65.89%	70.85%

Items with a factor loading ≥ 0.4 are shown in bold type.

Exploratory Factor Analysis (EFA) – BES Coping

Five components were extracted with eigenvalues of 7.02, 3.05, 1.80, 1.41 and 1.08, accounting for 68.47% of the variance cumulatively (See Table 18). Deeming all factor loadings that were over 0.50 as significant gave a five factor structure, which confirmed the factor structure of the Basic Emotions Scale. However, this meant that the "frustration" and "irritation" items did not load on any factor. Reducing the factor loading significance level to 0.4 allowed both of these items to load onto Factors 1 and 4. However, at the level of 0.40 the "mournful" and "despair" items cross loaded onto Factors 3 (Fear) and 4 (Sadness).

Table 18: Item loadings on each factor of the Basic Emotions Scale Coping after varimax rotation.

Item	F1 (Disgust)	F2 (Happiness)	F3 (Fear)	F4(Sadness)	F5(Anger)
Anger	.138	.147	.129	.084	**.891**
Despair	.072	.108	**.408**	**.507**	.283
Shame	**.754**	.121	.256	-.069	-.018
Anxiety	.208	.059	**.846**	.128	.034
Happiness	-.052	**.825**	-.059	.260	.060
Frustration	**.457**	.279	.347	.032	.306
Misery	.191	.203	.243	**.801**	-.134
Guilt	**.811**	.071	.180	.216	.117
Nervousness	.032	.013	**.683**	.260	.088
Joy	.024	**.897**	-.070	.189	.060
Irritation	.279	.312	-.042	**.499**	.245
Gloominess	.095	.289	.389	**.589**	.043
Humiliated	**.718**	-.107	.024	.182	.110
Tense	.209	.051	**.747**	.153	.178
Loving	.012	**.819**	.200	.013	.018
Aggression	.234	.040	.098	.032	**.892**
Mournful	.313	.035	**.404**	**.585**	.054
Blameworthy	**.725**	-.044	.130	**.450**	.154
Worried	.356	.052	**.699**	.136	-.009
Cheerful	.072	**.883**	.136	.067	.106
Disgust (i.e. repulsion)	**.665**	-.018	.323	.131	.281
% of variance	33.43%	14.53%	8.61%	6.71%	5.17%
Cumulative variance	33.43%	47.97%	56.58%	63.29%	68.47%

Items with a factor loading ≥ 0.4 are shown in bold type.

Exploratory factor analysis summary:

In general, the hypothesised factor structure of each of the three questionnaires confirms the initial item pool and structure of the Basic Emotions Scales – Weekly, General and Coping. Frustration, irritation and despair items loaded at a lower level causing less of a "neat fit" in the factor model. The results indicate that the BES provides a clinically relevant factor structure in a population of survivors of CSA. The factor solution is almost identical to the confirmatory analysis of the Basic Emotion Scale in a student population, and the obtained factor solution cumulative variances are high for all three scales accounting for 65.29–70.85% of the variance (Power, 2006). There was a consistent pattern across all three scales

with the largest proportion of variance accounted for by "disgust", followed by "happiness", followed by "fear". In conclusion, exploratory factor analysis of each of the three Basic Emotion Scales (Weekly, General and Coping) highlights the importance of the emotions of disgust and happiness in a population of survivors of childhood sexual abuse. These emotions will be explored further in Journal Article 2.

Hypothesis 3: Basic emotions will predict post-traumatic symptomatology and scores on the CORE.

Post-traumatic symptoms

Regression analyses were conducted to determine if the PCL-C total scores and three subscales were predicted by *"trait"* basic emotions (sadness, fear, disgust, anger and happiness on the BES-General scale) and REQ subscales (external dysfunctional and external functional), after adjusting for age and gender (See Table 19). A stepwise analysis was used to evaluate the predictive function of this set of variables on each of the dependent variables. Assumptions regarding quantitative variables, non-zero variance, multicollinearity, homoscedasticity, normally distributed errors and independent errors were met. The Durbin Watson values were checked. All values were greater than 1 and less than 2, indicating that the residual terms were uncorrelated.

Table 19: Predicting post-traumatic symptomatology from "trait" emotions and emotion regulatory strategies.

	Post-traumatic checklist – civilian version			
	PLC-Total	**Re-experiencing**	**Hyperarousal**	**Avoidance**
Predictor	Beta	Beta	Beta	Beta
BES-G Disgust	**.163**	**.317***		
BES-G Sad	**.329****	.**205***	**.335*****	.**344*****
BES-G Fear	**.242***	.**287****	.**228****	**-**
REQ External dysfunctional	**.161***	**-**	.**337*****	**-**
AdjR^2	**.445**	**.445**	**.415**	**26.9**
F	**20.81**	**27.44**	**24.43**	**19.19**

BES-G=Basic Emotions Scale – General. REQ=Regulation of Emotions Questionnaire *p<0.05 **p<0.01 *** p<0.001

Regression analyses produced three models for each of the subscales. The final model for each of the subscales is reported above. Age and gender were not significant predictors. Disgust was retained in the third model for PCL-C total scale, but was not significant. Prior to the addition of the REQ subscales to the model, disgust was significant (β=0.35, p=0.039). The results suggest that sadness, fear, disgust and external dysfunctional coping strategies predict global PTSD symptomatology. Re-experiencing is also predicted by the same three emotions (sadness, fear and disgust). Hyperarousal is predicted by sadness, fear and external dysfunctional strategies, and avoidance is predicted by sadness.

General psychopathology

The outcome measures (dependent variables) were the CORE subscales. The independent variables were "*state"* basic emotions (sadness, fear, disgust and happiness) and the REQ subscales (external dysfunctional and external functional). Gender and age were included as

background variables but were not significant. A stepwise analysis was used to evaluate the predictive function of this set of variables on each of the dependent variables. As with the previous analyses, assumptions relevant to regression analyses were met.

The analyses produced five models, the final model retained "disgust", but not as a significant predictor on the global distress or subjective well-being subscales (See Table 20). Disgust was a significant predictor for global distress (β=0.024, p=0.002) and subjective well-being (β=0.024, p=0.01) prior to the REQ subscales being entered into the regression model. The results suggest that global distress (with and without risk) in this population is predicted by the emotions of sadness and disgust, and negatively predicted by happiness and dysfunctional regulatory strategies. Problems on the CORE are predicted by sadness, fear and low happiness. Interestingly, disgust is the only emotion which is in the model predicting risk. Disgust was a significant predictor (p=<0.001) for the risk subscale, until the regulatory strategies were entered into the model.

Table 20: Significant predictors of general psychopathology on the CORE from "state" emotions and emotion regulatory strategies – final model.

Clinical Outcomes in Routine Evaluation						
	Global distress	**Global distress-risk**	**Problems**	**Subjective well-being**	**Functioning**	**Risk**
Predictor	Beta	Beta	Beta	Beta	Beta	Beta
BES-W Disgust	.137	.201*		.174	.203**	.168
BES-W Happy	-.261***	-.248***	-.223**	-.329***	-.179*	
BES-W Sad	.293***	.273**	.239*	.211*	.301***	
BES-W Fear			.184*			
REQ External functional					-.275***	
REQ External dysfunctional	.195**	-.171*			.217**	.288**
AdjR^2	**.581**	**.528**	**.488**	**.460**	**.535**	**.415**
F	**28.50**	**23.95**	**19.90**	**22.10**	**23.79**	**18.58**

BES-W=Basic Emotions Scale Weekly. REQ=Regulation of Emotions Questionnaire, CORE=Clinical Outcomes in Routine Evaluation
***p<0.05 **p<0.01 *** p<0.001**

4.6 Discussion

The results of this study provide support for the significance of emotional experience in the symptomatology of survivors of CSA. High levels of self-reported negative emotions were reported as well as high levels of PTSD; consistent with previous research (Finucane et al., 2012). The factor analysis confirmed a profile, consistent with the SPAARS model, comprising of five basic emotions in a population of survivors of CSA. The results lend further support for previous findings of the utility of the BES in a student sample and clinical population of depressed and anxious individuals (Power, 2006; Power & Tarsia, 2007). Internal reliability for the BES in a clinical population of CSA survivors was very high, with the exception of the BES – Weekly Anger scale which approached the acceptable level of 0.70. The BES-Weekly Anger Scale was removed from the analysis due to the lower Cronbach Alpha score.

Disgust explained the most variance for all three versions of the Basic Emotions Scale, followed by happiness. This is consistent with recent research in the field where elevated levels of disgust have been observed in individuals with a diagnosis of PTSD (Finucane et al., 2012). Furthermore, women who have a history of CSA and resultant PTSD report significantly more disgust during recall of the incident, than those without PTSD (Shin et al., 1999). Until relatively recently, disgust has been an emotion overlooked in the literature, and shame has often been a focus when considering psychopathologies such as depression and eating disorders (Phillips, 1998; Power & Dalgleish, 1999). These findings provide further evidence of the importance for the consideration of disgust in the treatment of mental health difficulties.

Emotion and PTSD

The current study also examined a set of variables which might predict PTSD symptoms. With regard to the regression analyses, sadness, fear, disgust and external dysfunctional coping strategies predicted global PTSD symptomatology. Hyperarousal was predicted by sadness, fear and external dysfunctional strategies, and avoidance was predicted by sadness. These findings also provide support for the coupling of disgust and fear in post-traumatic symptomatology. However, the finding that sadness and external dysfunctional regulatory strategies also predict a large proportion of variance is interesting. There are two possible explanations for this finding. Firstly, it is possible that sadness was a predictor because participants had high levels of co-morbid depression. Depression was not assessed in this sample. Previous researchers have highlighted the difficulties associated with differentiating between depression and PTSD in survivors of CSA (Wolfe & Kimerling, 1997). It is often considered difficult to establish whether depressive symptoms constitute a separate disorder, or a response to posttraumatic symptomatology (Wolfe & Kimerling, 1997).

Increased depression symptoms have been associated with adult survivors of CSA (Briere & Runtz, 1988; Browne & Finkelhor, 1986; Elliott & Briere, 1992). Briere (1996) attributes the increased levels of depression to distortions in cognitions relating to self, others, the world and the future, which occur as a child in an attempt to make sense of the trauma. These distortions are thought to be maladaptive in adulthood when they become internalised, resulting in depression. It is possible that the finding that sadness predicts PTSD symptoms, alongside fear, disgust and external dysfunctional regulatory strategies, may reflect co-morbid depression, as well as PTSD.

Secondly, the finding of sadness, as well as disgust and fear, as a predictor may point to a differential emotional component in CSA-related PTSD. Sadness is an emotion traditionally associated with the appraisal of loss (Power & Dalgleish, 1997). One might hypothesise that there are many different kinds of loss associated with an interpersonal traumas, such as CSA; for example, a loss of trust, childhood and a sense of self (Sofka, 2008). It would not be difficult, therefore, to conceptualise CSA-related PTSD, theoretically, as a disorder which has a non-emotion specific component consistent with the traditional model of PTSD (re-experiencing and avoidance), and a different emotion specific component, i.e. sadness coupled with fear and disgust.

Research highlights the salience of sadness in the psychological sequelae of CSA. Conway, Mendelson, Giannopoulos, Csank, and Holm (2004) report increased levels of rumination on sadness in a population of CSA survivors, and an association between severity of abuse and the levels of rumination. In addition, Brewin, Hunter, Carroll and Tata (1996) found an association between intrusive memories related to CSA and depression. Dalgleish and Power (2004) label a "sadness emotion component" as a "traumatic loss reaction".

The SPAARS model proposes that there are two routes to emotion; associative and schematic routes which can operate in parallel (Power & Dalgleish, 2008). Interpreting findings from the current study within the SPAARS model might suggest that CSA-related PTSD may result in disgust and fear being processed through an associative route (the individual has learned on some level that interpersonal experiences are threatening, or to be feared), whilst sadness may be generated via the schematic route (where childhood and interpersonal experiences may be appraised in terms of traumatic loss and there are increased levels of rumination; Conway et al., 2004). This hypothesis might have important

implications for therapeutic approaches because, in theory, one could therefore address fear at the associative level using behavioural approaches, and use cognitive therapy to address appraisals of loss. Indeed, there is evidence for the effectiveness of cognitive behavioural therapy (CBT) oriented approaches in treating PTSD in survivors of CSA (McDonagh et al., 2005; Resick et al., 2008). Resick et al. (2008) conducted an RCT which dismantled the components (a cognitive therapy only component and a written account component) of Cognitive Processing Therapy (CPT) for the treatment of PTSD in females who had experienced interpersonal violence. The results of this study suggest that both cognitive therapy and written accounts are effective in reducing PTSD symptoms however; cognitive therapy appeared to perform better. It is proposed that the components of therapy addressing emotions at associative and schematic levels for PTSD and other psychopathology could also be examined in this manner. Disgust has been shown to be a more difficult emotion to address using exposure, than fear (Olatunji, Lohr, Sawchuk, & Tolin, 2007; Smits, Telch, & Randall, 2002). A dismantling study which examined the effect of targeting disgust using behavioural strategies or compassion focused exercises to address the emotion at the associative level and cognitive therapy aimed at the schematic level may be a clinically relevant approach to improving the evidence base.

Emotion and General Psychopathology

In terms of general psychopathology, global distress (with and without risk) was predicted by the emotions of sadness and disgust, and negatively predicted by happiness and external dysfunctional regulatory strategies. Problems on the CORE were predicted by sadness, fear and (low) happiness. Interestingly, disgust is the only emotion (and external dysfunctional regulatory strategies) included in the model predicting risk. The finding that disgust predicts risk has important implications for clinical interventions. Power and Dalgleish (2008)

suggest that disgust may play an important role in suicide and parasuicide. Similar to the findings for the post-traumatic symptoms, sadness, fear and disgust are salient emotions associated with distress and functioning in this population of CSA survivors. This has important clinical implications; addressing these emotions in therapy is likely to be fundamental to clinical gains.

Emotion regulation strategies and psychopathology

As mentioned, previous research has highlighted the role of rumination on sadness in a population of CSA survivors (Conway et al., 2004). There is much evidence to suggest that individuals who have experienced childhood sexual abuse experience difficulty regulating their emotions (e.g. Cloitre, Regina, Stovell-McClough, Chase, & Han, 2005). The findings in this study that dysfunctional regulatory strategies contribute to psychopathology such as PTSD and global distress, risk and functioning on the CORE is consistent with previous research (Cloitre et al., 2005) and highlights the importance of addressing emotion regulation in therapy.

Strengths and limitations of the study

There are a number of limitations associated with this study. Firstly, the factor analyses of the three versions of the BES were exploratory. Confirmatory factor analyses are required to allow solid conclusions to be drawn about the emotion profile of CSA survivors. Secondly, the population of survivors who participated in this study were referrals to a psychotherapy service which specialises in treating the sequelae of CSA. This service offers intensive psychotherapy and tends to treat individuals presenting with chronic or severe psychopathology. Therefore, this population may not be representative of CSA survivors as a whole. Thirdly, CSA is not itself a diagnosis. The individuals who participated in this

study are likely to present with a range of normal and disordered psychopathology. Measures of PTSD and general psychopathology are unlikely to capture the full symptom picture and it would have been particularly useful to have included a measure of depression symptoms. There was no sexual abuse history taken so one cannot know if abuse was a repeated or single incident, or the age at which it occurred. CSA survivors often also experience other forms of victimisation in childhood and adulthood, such as neglect or physical abuse, which are likely to contribute to psychopathology (Browne & Finkelhor, 1986; Ellis, Atkeson, & Calhoun, 1982; Gidycz, Coble, Latham, & Layman, 1993). This limits the conclusions which can be drawn about the trauma in this population, and whether their posttraumatic symptoms met the criteria associated with complex PTSD.

In addition, there are limitations with measuring emotion and emotion regulation using self-report measures. The SPAARS model proposes two routes to emotion, a schematic and associative route. The associative route is thought to be automatic. Emotion regulation is also considered to involve unconscious processes (Williams, Bargh, Nocera, & Gray, 2009). Self-report measures may not capture emotional experience which one is less consciously aware of. Nonetheless, the self-report measures used in this study have established internal reliability and validity. Finally, multiple testing may have inflated the likelihood of finding a significant result.

Despite these limitations, there are also a number of strengths associated with this study. The majority of research examining CSA involves only female survivors. Although there is a small sample of men in this study (n=15), men have been included in this research. This is the first study to examine the emotion profile of a population of survivors of CSA. The findings highlight the importance of the emotion of disgust in understanding

psychopathology associated with CSA. Until relatively recently, disgust has been overlooked in the literature relating to emotion. In addition, a model which accounts for the experience of everyday emotion, as well as emotional disorders has been used as the basis of the hypotheses. The findings provide support for the predictions made by the SPAARS model and associated theory, such as emotion specific and non-specific components. The study also highlighted potential differences between CSA-related PTSD and other forms of PTSD. This provides support for models of complex PTSD which postulate that there is a wider array of difficulties associated with childhood interpersonal trauma.

Clinical implications

These results have implications for the development of CSA-related therapies. The finding that dysfunctional emotion regulation skills predict psychopathology highlights the importance of addressing coping skills in therapy. Psychological therapies for survivors of CSA may need to focus on developing emotion regulation skills, prior to or alongside addressing emotional change on a schematic or associative level, in order to reduce psychopathology. Interestingly, third wave cognitive therapies, such as Dialectical Behavioural therapy (DBT), which have demonstrated effectiveness in treating Borderline Personality disorder (BPD) and success in treating CSA survivors with co-morbid BPD or depression, already take this approach; emphasising the development of emotion regulatory skills (Linehan, 1993*;* Linehan et al., 2006; Steil, Dyer, Priebe, Kleindienst, & Bohus, 2011). Furthermore, acknowledgement of the specific emotions implicated in psychopathology is important in formulation and treatment.

Addressing disgust, fear and sadness related appraisals are likely to be fundamental to symptom improvement. Power and Dalgleish (1999) suggest that the therapeutic techniques

used should be matched with the route to emotion (relating to the SPAARS model) involved. For example, if disgust is experienced at the associative level, then behavioural approaches may be a more appropriate modality for treatment, and it should be acknowledged that change on an associative level is likely to be a slower process (Power & Dalgleish, 1999). However, if sadness and associated appraisals of loss, experienced on a schematic level, are at the core of the emotional disorder, then cognitive therapy should be directed. Compassion-focused approaches might also be beneficial in addressing disgust at a schematic level (Gilbert & Proctor, 2006).

Future research directions

Following the exploratory analysis in this study, confirmatory factor analyses should be conducted on the BES. This study has examined the emotions which predict post-traumatic symptoms and general psychopathology in a population of survivors of CSA. Possible implications for treatment have been discussed and it has been suggested that exposure therapy could be used to address fear at the associative level, and that sadness related appraisals could be addressed at a cognitive level. These hypotheses are testable.

Future research should examine the effectiveness of treating emotion, such as sadness, using cognitive therapy, and addressing emotions at the associative level using exposure therapy. CSA is known to be associated with a range of psychopathology, future research should also examine the role of emotion in predicting other associated psychiatric diagnoses; for example, sleep disorders and dissociative disorders. In addition, the role of emotions and associated appraisals in predicting the proposed criteria of complex PTSD, e.g. self-perception, interpersonal relations, and somatisation, should be investigated. Finally, research to date, examining the relationship between the five basic emotions and

psychopathology, has relied on self-report measures. Other methodologies should be employed to gain an understanding of the role of automatic or unconscious emotion processes.

In summary, the present study found support for a model of five basic emotions in a population of CSA survivors. The exploratory factor analyses of the BES lent support to previous findings for student, and mixed depression and anxiety samples (Power, 2006; Power & Tarsia, 2007). The findings also support the idea that the everyday basic emotions can result in emotional disorders. Fear, disgust and sadness were predictors of PTSD symptoms and general psychological distress in this population. The finding that sadness is implicated in PTSD is interesting because most models of PTSD suggest that fear is the dominant emotion. Power and Dalgleish (2004) suggest that there might be a family of PTSD-like psychological reactions to extreme events that are similar to PTSD in their emotion non-specific component (re-experiencing and avoidance) and differ in their non-emotion component.

The results of the regression analyses point to the idea that CSA-related PTSD may be associated with an appraisal of loss, and subsequently the emotion of sadness is implicated in the disorder. Dysfunctional emotion regulation strategies were also significant predictors of psychopathology. These findings support previous research which has suggested that emotion regulation plays a significant role in functional impairment among survivors of childhood abuse (Cloitre et al., 2005).

4.7 References

Acuna E., & Rodriguez C. A. (2004). "Meta analysis study of outlier detection methods in classification," Technical paper, Department of Mathematics, University of Puerto Rico at Mayaguez, Retrieved from: academic.uprm.edu/ eacuna/ paperout.pdf. In proceedings IPSI 2004, Venice, 2004.

Arrindell, W. A., & van der Ende. J. (1985). An empirical test of the utility of the observations-to-variables ratio in factor and components analysis. *Applied Psychological Measurement, 9*, 165–178.

Brewin, C. R., Hunter, E., Carroll, F., & Tata, P. (1996). Intrusive memories in depression. *Psychological Medicine, 26*, 1271–1276.

Briere, J. (1988). The long-term clinical correlates of childhood sexual victimization. *Annals of the New York Academy of Sciences, 528*, 327-334.

Briere, J. (1996). Treatment outcome research with abused children: Methodological considerations in three studies. (Invited commentary). *Child Maltreatment, 1*, 348-351

Browne, A., & Finkelhor, D. (1986). Impact of child sexual abuse: A review of the research. *Psychological Bulletin*, *99*, 66–77.

Carolan, L. A., & Power, M. J. (2011). What basic emotions are experienced in bipolar disorder? *Clinical Psychology and Psychotherapy*, *18*, 366–378.

Cloitre, M., Regina, M., Stovall-McClough, R., Chase, K., & Han, H. (2005). Beyond PTSD: Emotion regulation and interpersonal problems as predictors of functional impairment in survivors of childhood abuse. *Behavior Therapy*, *36*(2), 119–124.

Cohen, J. (1988). *Statistical power analysis for the behavior sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Conway, M., Mendelson, M., Giannopoulos, C., Csank, P. A. R., & Holm, S. L. (2004). Childhood and adult sexual abuse, rumination on sadness, and dysphoria. *Child Abuse & Neglect, 28*(4), 393–410.

Courtois, C. A., & Ford, J. D. (Eds.). (2009). *Treating complex traumatic stress disorders: An evidence-based guide*. New York, NY: Guilford Press.

Dalgleish, T., & Power, M. J. (2004). Emotion-specific and emotion-non-specific components of Posttraumatic Stress Disorder (PTSD): Implications for a taxonomy of related psychopathology. *Behaviour Research and Therapy, 42*, 1069–1088.

Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion*, *6*, 169–200.

Elliott, D. M., & Briere, J. (1992). Sexual abuse trauma among professional women: Validating the Trauma Symptom Checklist-40 (TSC-40). *Child Abuse & Neglect: The International Journal, 16*, 391-398

Ellis, E. M., Atkeson, B. M., & Calhoun, K. S. (1982). An examination of differences between multiple- and single-incident victims of sexual assault. *Journal of Abnormal Psychology*, *91*, 221–224.

Evans, C. (2002). Towards a standardised brief outcome measure: Psychometric properties and utility of the CORE-OM. *The British Journal of Psychiatry*, *180*, 51–60.

Field, A. (2005). *Discovering statistics using SPSS* (2nd ed.). London: Sage.

Finucane, A. M., Dima, A., Ferreira, N., & Halvorsen, M. (2012). Basic emotion profiles in healthy, chronic pain, depressed and PTSD individuals. *Clinical Psychology & Psychotherapy*, *19*, 14–24.

Fox, J. R. E., & Froom, K. (2009). Eating disorders: A basic emotions perspective. *Clinical Psychology and Psychotherapy*, *16*(4), 328–326.

Fox, J. R. E., & Harrison, A. (2008). The relation of anger to disgust: The potential role of coupled emotions within eating pathology. *Clinical Psychology and Psychotherapy*, *15*, 86–95.

Gidycz, C. A., Coble, C. N., Latham, L., & Layman, M. J. (1993). Sexual assault experience in adulthood and prior victimization experiences: A prospective analysis. *Psychology of Women Quarterly*, *1*, 151–168.

Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism. A pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy*, *13*, 353–79.

Herman, J. L. (1992). *Trauma and recovery: The aftermath of violence from domestic abuse to political terror.* New York, NY: Basic Books.

Herman, J. L. (1997). *Trauma and recovery: The aftermath of violence from domestic abuse to political terror.* New York, NY: Basic Books.

Kline, P. (1993). *An easy guide to factor analysis*. London: Routledge.

Linehan, M. M. (1993). *Cognitive–behavioral treatment of borderline personality disorder*. New York, NY: Guilford Press.

Linehan, M. M., Comtois, K. A., Murray, A. M., Brown, M. Z., Gallop, R. J., Heard, H. L., … & Lindenboim, N. (2006). Two-year randomized controlled trial and follow-up of dialectical behavior therapy vs. therapy by experts for suicidal behaviors and borderline personality disorder. *Archives of General Psychiatry, 63*, 757–766.

McDonagh, A., McHugo, G., Sengupta, A., Demment, C. C., Schnurr, P. P., Friedman, M., & Descamps, M. (2005). Randomized trial of cognitive-behavioral therapy for chronic posttraumatic stress disorder in adult female survivors of childhood sexual abuse. *Journal of Consulting and Clinical Psychology, 73*(3), 515–524.

Molnar, B. E., Buka, S. L., & Kessler, R. C. (2001). Child sexual abuse and subsequent psychopathology: Results from the National Comorbidity Survey. *American Journal of Public Health*, *91*, 753–760.

Oatley, K., & Johnson-Laird, P. N. (1987). Towards a cognitive theory of emotions. *Cognition and Emotion*, *1*, 29–50.

Olatunji, B. O., Lohr, J. M., Sawchuk, C. N., & Tolin, D. F. (2007). Multimodal assessment of disgust in contamination-related obsessive-compulsive disorder. *Behavior Research and Therapy, 45*, 263–276.

Overton P. G., Markland, F. E., Taggert, H. S., Bagshaw, G. L., & Simpson, J. (2008). Self-disgust mediates the relationship between dysfunctional cognitions and depressive symptomatology. *Emotion*, *8*, 379–385.

Phillips, K. F. V., & Power, M. J. (2007). A new self-report measure of emotion regulation in adolescents: The Regulation of Emotions Questionnaire. *Clinical Psychology & Psychotherapy*, *14*, 145–156.

Phillips, M. L., Senior, C., Fahy, T., David, A. S. (1998). Disgust – the forgotten emotion of psychiatry. *British Journal of Psychiatry*, *172*, 373–375.

Power, M. J. (2006). The structure of emotion: An empirical comparison of six models. *Cognition and Emotion*, *20*, 694–713.

Power, M. J., & Dalgleish, T. (1997). *Cognition and emotion: From order to disorder*. Hove: Psychology Press.

Power, M. J., & Dalgleish, T. (1999). Two routes to emotion: Some implications of multi-level theories of emotion for therapeutic practice. *Behavioural and Cognitive Psychotherapy, 27*, 129–141.

Power, M. J., & Tarsia, M. (2007). Basic and complex emotions in depression and anxiety. *Clinical Psychology & Psychotherapy*, *14*, 19–31.

Resick, P. A., Galovski, T. E., Uhlmansiek, M. O., Scher, C. D., Clum, G. A., & Young-Xu, Y. (2008). A randomized clinical trial to dismantle components of cognitive processing therapy for posttraumatic stress disorder in female victims of interpersonal violence. *Journal of Consulting and Clinical Psychology, 76*(2), 243-258.

Shin, L. M., McNally, R. J., Kosslyn, S. M., Thompson, W. L., Rauch, S. L., Alpert, N. M., Metzger, L.J…Pitman, R. (1999): Regional cerebral blood flow during script-driven imagery in childhood sexual abuse-related posttraumatic stress disorder: A positron emission tomographic investigation. *American Journal of Psychiatry*, *156*, 575–584.

Smits, J. A. J., Telch, M. J., & Randall, P. K. (2002). An examination of the decline in fear and disgust during exposure-based treatment. *Behaviour Research and Therapy, 40*, 1243–1253.

Spataro, J., Mullen, P. E., Burgess, P. M., Wells, D. L., & Moss, S. A. (2004). Impact of child sexual abuse on mental health: Prospective study in males and females. *British Journal of Psychiatry*, *184*, 416–421.

Steil, R., Dyer, A., Priebe, K., Kleindienst, N., & Bohus, M. (2011). Dialectical behavior therapy for posttraumatic stress disorder related to childhood sexual abuse: A pilot study of an intensive residential treatment program. *Journal of Traumatic Stress*, *24*, 102–106.

Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993). *The PTSD checklist (PCL): Reliability, validity, and diagnostic utility.* Paper presented at the *9th Annual Conference of the ISTSS*, San Antonio, TX.

Williams, L.E., Bargh, J.A., Nocera, C., & Gray, J.R. (2009). On the unconscious regulation of emotion: Nonconscious reappraisal goals modulate emotional reactivity. *Emotion, 9,* 847-854.

Wolfe, J., & Kimerling, R. (1997). Gender issues in the assessment of posttraumatic stress disorder. In J. P. Wilson, & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 192–238). New York: Guilford Press.

CHAPTER 5: JOURNAL ARTICLE 2

5.1 Title Page

A comparison of the experience of emotion in childhood sexual abuse survivors and those who have not experienced childhood trauma: an examination implicit and explicit disgust.

Short title for running head: Implicit and explicit disgust in a sample of CSA survivors

(This has been written in accordance with the submission guidelines for, *Clinical Psychology and Psychotherapy*, see Appendix 2)

Author: Eimear McKay [1,2]

[1] Clinical and Health Psychology, University of Edinburgh, UK

[2] Clinical Psychology Dept, NHS Fife, UK

Word Count (excluding references):6901

Address for correspondence:

Eimear McKay

NHS Fife Clinical Psychology Dept, Lynebank Hospital, Dunfermline KY11 4UW

(Email: eimearmckay@nhs.net, Tel: +44 (0)1383 565403)

5.2 Abstract

Background: Previous research has confirmed the utility of the Basic Emotions Scale in a sample of survivors of childhood sexual abuse (CSA). The study compares basic emotions and psychopathology in a sample of CSA survivors (n=26) with a sample of individuals who report that they have not experienced childhood trauma, but who are currently receiving therapy within an adult mental health psychology service (NCT; n=25). The study also explores "implicit" disgust self-concept relative to happiness in these two samples. Associations between implicit disgust self-concept, self-reported basic emotions, trauma symptoms and general psychological functioning are examined.

Method: Both groups completed self-report measures examining basic emotions, emotion regulation, dissociation, trauma symptoms and general psychopathology. Implicit disgust self-concept was assessed using an Implicit Association Test (IAT).

Results: The CSA group reported significantly higher levels of all negative state and trait emotions, dissociation, trauma symptoms and general psychopathology than the NCT group. There were no significant differences between groups on scales measuring coping with the five basic emotions, regulation of emotion, or a test measuring implicit disgust self-concept. Explicit self-reported trait disgust was associated with post-traumatic symptomatology and general psychopathology.

Conclusion: Survivors of CSA experienced higher levels of negative emotions, lower happiness and significantly higher scores on psychopathology than the NCT group. However, there was no significant difference observed between self-reported coping or regulation strategies. Disgust is prominent in the emotion profile of CSA survivors. The implicit concept of self-disgust was not found to significantly correlate with self-reported disgust, which may indicate that these are separate processes. It is possible that

implicit self-disgust operates via the associative route in the SPAARS model. Explicit self-disgust was associated with psychopathology.

5.3 Introduction

In the last twenty years, there has been a growing interest in the relationship between emotion and psychopathology (Carolan & Power, 2011; Power & Fyvie, 2012; Power & Tarsia, 2007). A model of emotion and cognition known as the Schematic Propositional Analogical Associative Representation Systems model (SPAARS) provides a theoretical explanation for the relationship between emotion, cognition and psychopathology (Power & Dalgleish, 2008).

In brief, the SPAARS model proposes that there are five basic emotions (disgust, happiness, anger, sadness and fear), which each have associated appraisals. Both normal and emotional disordered experiences are thought to be derived from these five basic emotions. The SPAARS model proposes that each basic emotion is linked to an appraisal of an event and the emotion triggered by the appraisal signals the individual into action. SPAARS is a multilevel model; emotion-related stimuli are processed by the analogical system, output from this system is then processed in parallel by either the associative (automatic emotion processing), schematic (processing requires effortful appraisal) or the propositional system (indirectly operates via connection with the schematic and associative levels). Emotional profiles can be shaped by feedback loops which develop between or within basic emotion modules. Furthermore, the SPAARS model proposes that emotional disorder can be understood to be the result of coupling of basic emotions, or processing levels within the same emotion (e.g. associative and schematic levels). For example, the coupling of sadness and disgust is thought to underlie depression (Power & Dalgleish, 2008).

Study 1 found evidence for the experience of each of these basic emotions in a sample of survivors of childhood sexual abuse (CSA) as well as emotion predictors (disgust, fear and sadness) of PTSD and general psychological distress. A number of other studies

have examined basic emotions and psychopathology, and concluded that the basic emotions can predict psychopathology. For example, Fox and Harrison (2008) examined the coupling of emotions in eating psychopathology. They concluded that the emotions of disgust and anger are likely to be coupled in bulimic pathology. The current study furthers this exploration of emotion in survivors of CSA by comparing the emotion profile of CSA survivors with a population of mental health service users who report no history of childhood trauma. Study 1 highlighted the salience of disgust in the emotion profile of survivors of CSA. Disgust is given particular attention in this study.

As an emotion, disgust has been relatively neglected in the literature until the 1990s. This is surprising because it has been identified as a "basic emotion" by Eckman (1992) and discussed by Power and Dalgleish (1997) as one of the five basic emotions. Researchers have suggested that disgust evolved initially as way of avoiding biological pathogens, and has since extended to include other threats such as moral and social threats (Rozin & Fallon,1987; Rozin, Haidt & McCauley, 1993; Rozin, Haidt, McCauley & Imada, 1997). It is hypothesised that identifying something as disgusting, sanctions one to avoid it. This theory has interesting implications for how disgust might impact on one's emotional experience. It is plausible that a high level of self-disgust could result in attempts to avoid one's emotional experience (experiential avoidance) and this would influence other regulatory strategies.

In recent years the interest in this emotion and its relationship to psychopathology has grown (Phillips, Senior, Fahy & David, 1998; Olatunji & McKay, 2006). In particular, there has been a focus on the relationship between disgust and anxiety disorders (McKay, 2006; Olatunji & McKay, 2006). In Study 1, included in this thesis, disgust was shown to explain a large amount of variance in the emotion profile of survivors of

CSA. The relationship between disgust and psychopathology associated with CSA will be examined in the current study.

Aside from neurobiological studies, disgust has for the most part been studied using self-report measures. One limitation with this approach is the risk of bias introduced by participant self-presentation. Individuals with high levels of self-disgust might be more vulnerable to self-presentation concerns. One way of gaining information about disgust self-concept, beyond self-report, is by using an Implicit Association Test (IAT; Greenwald, McGhee and Schwartz, 1998).

Furthermore, the SPAARS model (Power & Dalgleish, 2008) proposes an automatic route to the experience of emotion, and it argues that it is possible to be aware of the appraisals which underlie an emotion, and simultaneously hold an unconscious interpretation of an event. The model proposes that conscious and unconscious appraisals can be conflicting. Complex emotional experiences or emotional disorders may be the result of conflicting emotions and appraisals. An IAT is used in this study to understand the influence of implicit (or unconscious) disgust self-concept on emotional disorder in a sample of survivors of CSA on emotional disorder.

The IAT is a tool to measure implicit cognitions. Response latencies are measured as an individual makes judgments about stimuli presented on screen. The IAT is based on the assumption that "associations [between concepts] can be revealed by mapping two discrimination tasks alternately onto a single pair of response" (Greenwald et al., 1998, p. 1469). Discrimination categories are selected by participants pressing the assigned response key, e.g. one key might be "disgust and self" and another key might represent "happy and friend" (Greenwald et al., 1998). Reaction times are likely to be faster when a presented subordinate target word is considered congruent with one of the

superordinate categories. For example, an individual who feels high levels of self disgust might respond faster to "shame" (subordinate word) on screen, because they view it as congruent with disgust and self (superordinate). However, when the converse superordinate categories are presented on either side of the screen, e.g. "disgust and friend" versus "happy and self" (less associated categories), reaction times are likely to be slower as the individual may wish to place shame with self but recognizes it also belongs to the disgust superordinate category (see Figure 9).

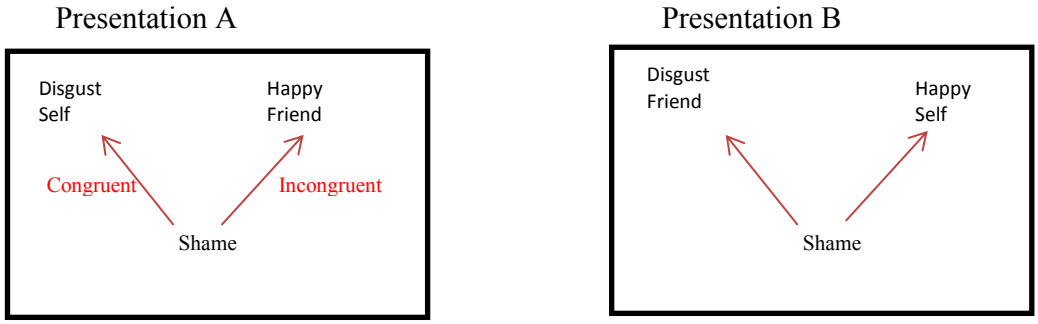


Figure 9: An example of an IAT. Superordinate categories that are believed to be congruent with the target word are likely to result in a faster response latency (Presentation A), whereas those felt to be less associated categories are likely to result in slower response latencies. For an individual with high implicit disgust self-concept, responding is likely to be quicker for presentation A than B.

The IAT has been used to examine emotion and self-concept. A recent article, published after the task in Journal Article 2 had been designed, also examines disgust self-concept. Rösch et al. (2011) identified a relationship between post-traumatic symptoms and elevated levels of disgust in a population of individuals with a diagnosis of borderline personality disorder, using an IAT. The article highlighted the independence of an explicit disgust concept and an implicit disgust self-concept (Rösch et al., 2011).

The current study builds on the existing evidence for the use of the IAT in examining implicit emotion. This study will explore how explicit and implicit self-disgust concept (referred to throughout the rest of the article as 'implicit disgust') might be related to the

experience of other basic emotions and their regulation. Furthermore, the association between implicit and explicit self-disgust and PTSD symptomatology, as well as general psychological distress, is examined.

This study aimed to address the following three hypotheses:

1. Higher levels of negative emotions and lower levels of happiness will be experienced by survivors of childhood sexual abuse, compared to a population with mental health difficulties who have not experienced childhood trauma. Furthermore, individuals who have experienced CSA will have more difficulty coping with emotions, experience more psychopathology and utilise less helpful emotional regulatory strategies.

2. Individuals who have experienced childhood sexual abuse will demonstrate greater levels of an implicit disgust than a clinical population who have not experienced childhood sexual abuse. This will be evidenced by a stronger association between the self and disgust, as measured by response latencies on the IAT.

3. Explicit trait disgust and implicit disgust will be associated with greater difficulties regulating and coping with emotions, increased trauma symptoms and global distress.

5.4 Method

This study involved a quantitative cross-sectional independent samples design. Twenty-six individuals who had experienced childhood sexual abuse were recruited from a psychology department of the National Health Service (NHS) in a single geographical area in the East of Scotland, or from one of three voluntary sector agencies, in the same

geographical area, specialising in supporting survivors of CSA. Twenty-five individuals who were outpatients of the same psychology service were also recruited. These individuals identified themselves as having no experience of childhood trauma.

For the CSA group, inclusion criteria were: previously disclosed childhood sexual abuse, currently engagement with support services (NHS psychology, mental health services or voluntary agency), over 18 years of age and fluency in the English language, as translation services were unavailable. The no childhood trauma (NCT) group had the same inclusion criteria, with the exception of childhood sexual abuse. Individuals in the NCT group had to be identified by their psychologist as someone who had not disclosed childhood trauma, and this was checked with the participant at the point of gaining informed consent.

5.4.1 Materials

Participants were asked to complete the following measures:

EXPLICIT MEASURES

***Basic Emotions Scale* (BES; Power, 2006):** is a three part questionnaire which assesses basic emotions experienced over the last week, in general, and one's ability to cope with the 21 emotion terms which are rated using a seven point Likert scale. The 21 emotion terms can be reduced to five subscales, which correspond to the five basic emotions (Anger, Sadness, Disgust, Fear and Happiness) as described by Oatley and Johnson-Laird (1987) and Power and Dalgleish (1997). Good internal reliability and discriminant group validity have been indicated in a clinical sample of outpatients with anxiety and depression (Power & Tarsia, 2007).

The Regulation of Emotions Questionnaire **(Phillips & Power, 2007):** is a 21 item self-report measure originally designed to assess the frequency with which adolescents employ functional and dysfunctional strategies utilising internal and external resources to manage their emotions. Participants are required to indicate, using a five point Likert scale, how often they use a list of emotion regulation strategies. The items map onto four subscales – external functional, external dysfunctional, internal functional and internal dysfunctional.

Sample items for each of the four subscales include the following "I harm or punish myself in some way" (Internal Dysfunctional), "I review (re-think) my thoughts or beliefs" (Internal functional), "I bully other people (e.g. saying nasty things to them or hitting them" (External dysfunctional) and "I talk to someone about how I feel" (External functional). The validity of this measure was supported in a study of adolescents.

The Clinical Outcomes in Routine Evaluation **(CORE-OM; Evans et al., 2000):** is a 34 item self-report measure with scores on four dimensions – subjective well-being, problems or symptoms experienced, social functioning and risk to self or others. Participants rate each of the 34 items on a five point scale (ranging from "not at all" to "most or all of the time"), indicating how they have felt over the last week. Evans (2002) reports good internal consistency for all four dimensions (ranging from α=0.75 to α=0.95) across all domains, and good convergent validity with other standardised measures. With the exception of the risk domain, good test-retest reliability has been demonstrated (α=0.87–0.91). The stability of the risk domain has been reported as lower than the stability for other subscales (α=0.64), this is attributed to the situational and reactive nature of the items in this dimension.

***PTSD Checklist Civilian Version* (PCL-C; Weathers, Litz, Herman, Huska & Keane, 1993):** consists of seventeen items which correspond to the DSM-IV diagnostic criteria for post-traumatic stress. Participants identify how often they have been troubled by each symptom in the last month on a five point scale. Psychometric data on the scale was originally established using the military version of the scale. This data indicated high internal consistency co-efficients for the total scale (α=0.97) and the subscales (α=0.92–0.93).

***Dissociative Experiences Scale II* (DES II: Bernstein & Putnam, 1986)** is a 28 item self-report measure which is used to assess dissociative experiences. Participants are asked to rate, between 0% and 100%, how often a range of dissociative experiences occurs to them. For example: "Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear. Circle a number to show what percentage of the time this happens to you."

Meta-analytic validation of the DES (van Ijzendoorn & Schuengel, 1996) has suggested that the measure has excellent convergent validity with other measures of dissociation and predictive validity (post-traumatic stress disorder: combined effect size d=0.75, N=1.099, and abuse: combined effect size d=0.52, N=2.108). It is also believed to have good validity and reliability (Carlson & Armstrong, 1994; Carlson & Putnam, 1993).

***IMPLICIT MEASURE* – Implicit association test (IAT; Greeenwald, McGhee & Schwartz, 1998)**

An IAT was designed and implemented using Eprime v2.0 software to gain understanding of implicit emotion related self-concepts. Following the factor analysis

conducted in Study 1, the emotion terms "disgust" and "happy" were felt to be the most pertinent implicit emotion self-concepts to examine, as they explained the most variance in the emotion profile of a sample of CSA survivors (See Journal Article 1).

The central premise of the implicit association test is that stimuli are categorised more quickly when the target and superordinate pairings are consistent with the participant's automatic associations, rather than conflicting with their implicit associations. The design of this task is based on this assumption. The speed of response enables participants' "implicit beliefs" to be identified, as respondents should be quicker when responding to a presentation that is consistent with their beliefs. The IAT has demonstrated good internal consistency (ranging from 0.7 to 0.9) and adequate test-retest reliability (Greenwald & Nosek, 2001; Schmukle & Elgoff, 2004).

In this study, participants were required to classify emotion words (developed from the Basic Emotions Scale, happiness and disgust subscales) which appeared consecutively on screen into one of two superordinate categories, which also appeared on screen (See Figure 10). The four superordinate categories used in the counterbalanced blocks were "Self and happy" or "Self and disgust", and "Friend and happy" or "Friend and disgust". It follows that a participant who implicitly associates more strongly with disgust, rather than happiness, would respond more quickly when the response target word is from the disgust category and one of the response keys is assigned to "Self and disgust", as opposed to "Friend and happy".

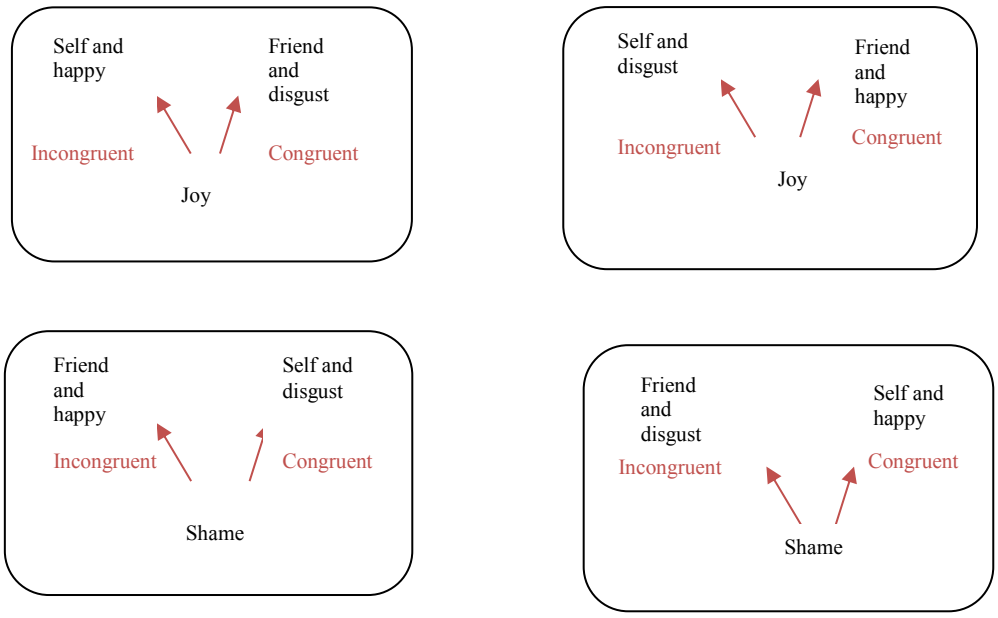


Figure 10: IAT: Views of the computer screen. Four separate examples of possible views of the computer screen during a block of the IAT. Participants are required to classify each target word into the superordinate categories using either the "s" or "l" keys. The target words are always presented in the bottom centre of the screen and the superordinate categories alternate between trials on the left and right hand corners of the screen. The next trial is presented following a key press and a new target word appears. The superordinate categories may also switch according to randomisation. The type and arrows in red did not appear on screen. The red type is highlighting the way in which someone with high implicit disgust might respond.

If an individual experiences high implicit disgust, they might be expected to respond to a target word from the disgust category (e.g. shame) in a way that confirms 'self-disgust' and 'friend-happy' associations and denies 'happy-self' and 'disgust-friend' associations (See Figure 10). This might be considered implicit disgust *congruent* responding. As blocks were alternated with reverse presentations (e.g. self-happy and friend-disgust appearing as superordinate categories), the same individual on these trials is likely to present with *incongruent* responding , i.e. confirming 'happy-self' for a disgust target word, and denying 'disgust-friend' as an appropriate superordinate category.

In summary, participants were required to respond in a way which was either congruent with an implicit disgust, whereby they associated disgust with themselves and happiness

with friend, or congruent with an implicit happiness, where they associated happiness with themselves and disgust with friend.

There were a total of 24 trials and 12 target words presented in each block. Superordinate categories changed position on screen from left to right at random, and the order of target words also occurred at random. Prior to completing the two block presentation used in the analysis, participants were given the opportunity to complete two practice blocks with assistance from the primary researcher. The first trial block required the participant to categorise a set of non-emotion words into superordinate categories of "self" or "best friend". The second trial block presented target words relating to anxiety and depression subscales of the BES, and the superordinate categories were "sad" and "anxious". The IAT was administered on an NHS encrypted laptop. IAT data were analysed using the conventional scoring algorithm proposed by Greenwald et al. (1998), which results in an "IAT effect measure" (See Table 21). This measure represents the difference in reaction time between blocks. In this task, negative values represent a stronger association between self and disgust and positive values indicate a stronger association between self and happy.

Table 21: Conventional scoring algorithm for the Implicit Association Test (IAT; Greenwald, Nosek & Banaji, 2003).

Conventional IAT Scoring Algorithm
Use data from B4 & B7 (Data from test blocks)
Nonsystematic elimination of subjects for excessively slow responding and/or high error rates
Drop first two trials from each block
Recode latencies outside 300/3000 boundaries to the nearer boundary value
Log transform the resulting values
Average the resulting values for each of the two blocks
Compute the difference: B7–B4

Following completion of these measures, participants were asked for feedback on their experience of participation. If participants consented, this feedback was recorded and

transcribed. Participants were informed that their feedback was being collected to improve future research in this area.

Ethical considerations:

Informed consent was gained prior to participation, and individuals were advised they could withdraw from the study at any time without having to give a reason (See Appendix 15/16). A primary concern of the researcher was ensuring that the study did not cause undue psychological distress to participants. The participant information sheets did not use the term 'childhood sexual abuse', but instead used the phrase 'adverse childhood experiences' in the hope that this might be less emotive in terminology. In addition, the questionnaires and IAT did not ask directly about previous traumatic experiences, but were instead focused on present emotional experiences, symptoms and functioning.

Participants were only recruited to the study if they were referred by their healthcare professional/support worker; thus, ensuring that they had an established therapeutic relationship which could be accessed for support and further information. In addition, each participant's GP was informed by letter of their involvement in the study. Consent was sought by the primary researcher, rather than the referring clinician, to ensure that the participant did not feel coerced in any way because of their existing therapeutic relationship. Participants were asked if they would like a summary interpretation of their scores on the measures to be shared with their healthcare professional in order to inform therapy. The majority of participants availed of this and healthcare professionals in both the voluntary sector and psychology service reported finding this beneficial.

5.5 Results

" Explicit" self-report data were collected from 26 survivors of CSA and 25 individuals who reported no childhood trauma. "Implicit" data were also collected from 25 out of the 26 survivors of CSA and the 25 individuals in the no childhood trauma (NCT) group. Implicit data was not collected from one of the individuals in the CSA group as a health condition affected the accuracy of response times on the computer task. Response latencies from the IAT were transformed into composite scores (IAT effect measure) using the conventional IAT scoring algorithm (See Table 21).

The descriptive data for each of the self-report measures are outlined in Table 23. Imputation of the median value (MDI) was felt an appropriate method to address missing values in the self-report data, which were randomly distributed throughout the measures and did not exceed 3.9% for any of the variables (Acuna & Rodriguez, 2004). Examination of normality plots and skewness and kurtosis were calculated using z scores, and revealed that data for several of the measures were not normally distributed ($z \geq 1.96$; see Appendix 20). Significant skew was apparent for BES-W Disgust ($z=2.82$), BES-G disgust ($z=2.56$), BES-C Disgust ($z=3.86$), BES-W Happy ($z=-2.10$), BES-G Happy ($z=3.17$), BES-C Happy ($z=3.17$), BES-W Anxiety ($z=-2.62$), CORE Risk ($z=3.26$), and skewness and kurtosis were apparent for REQ external functional ($z=2.76$, 2.69) and REQ external dysfunctional ($z=7.58$, 16.51).

Komolgrov-Smirnov's goodness of fit test was applied to explore normality further. This test confirmed the violation of normality for the measures identified as skewed (see Appendix 20). Square root transformations were applied to the skewed data. Unfortunately, several of the variables still violated these assumptions. Consequently, both parametric and non-parametric tests were used to analyse the data. There were no differences in results for either form of analyses; therefore, parametric results have been

reported because the t-test is a relatively robust form of analysis (Norman, 2010). Levene's test has also been used to examine homogeneity of variance. (For information, non-parametric data is reported in Appendix 22).

Data for hypotheses one and two have been analysed using independent samples t-tests. This study contains a large number of comparisons. To control for Type I error, Bonferroni's correction was performed to hold the familywise error rate to 0.05 (Grove & Andreasen, 1982). Bonferroni's correction placed statistical significance at <0.001. This figure appeared highly conservative and inflated the risk of Type II error. In light of the exploratory nature of this study and the importance of balancing the risk of a Type I and Type II error, the p value was set at <0.01.

Table 22: Descriptive data for the CSA and NCT groups

Factor	Level/Units	Mean or Nos (Sd or %) Survivors of childhood sexual abuse (n=26)	No childhood trauma group (n=25)
Age	**Years**	45.5 (12.54)	38.6 (13.3)
Gender	Males	3 (11.5%)	2 (8%)
	Females	23 (88.5%)	23 (92%)

Table 23: Means and standard deviations for the variables in both the group of CSA survivors and non-trauma group.

Measure	Subscale	CSA Group Mean	CSA Group (SD)	NCT Group Mean	NCT Group (SD)
BES-Weekly	Anger	4.20	(1.28)	2.93	(1.22)
	Sad	4.04	(1.56)	2.58	(1.43)
	Disgust	3.90	(1.59)	1.88	(1.13)
	Anxiety	5.23	(1.43)	4.09	(1.55)
	Happy	3.72	(1.28)	4.74	(1.44)
BES-General	Anger	4.28	(1.56)	3.30	(1.38)
	Sad	4.36	(1.65)	3.04	(1.68)
	Disgust	4.39	(1.55)	2.12	(1.11)
	Anxiety	5.22	(1.47)	4.42	(1.65)
	Happy	2.62	(1.22)	4.00	(1.76)
BES-Coping	Anger	4.43	(1.31)	3.93	(1.62)
	Sad	4.68	(1.35)	4.10	(1.58)
	Disgust	4.70	(1.30)	3.93	(1.68)
	Anxiety	4.75	(1.32)	4.45	(1.34)
	Happy	2.62	(1.22)	1.76	(1.12)
REQ	External-Functional	2.50	(0.76)	2.87	(0.80)
	Internal-Functional	3.01	(0.54)	2.93	(0.64)
	External-Dysfunctional	1.70	(0.62)	1.55	(0.66)
	Internal-Dysfunctional	3.06	(0.97)	2.43	(0.70)
PCL-C	Re-experiencing	16.57	(5.71)	9.52	(3.39)
	Avoidance	22.42	(7.56)	13.84	(5.98)
	Hyperarousal	16.8	(4.96)	10.52	(3.44)
	Total	55.80	(15.92)	33.8	(10.74)
CORE	Subjective Well-being	2.40	(1.20)	1.32	(1.03)
	Problems/Symptoms	2.36	(1.11)	1.36	(0.86)
	Functioning	1.93	(0.93)	1.01	(0.77)
	Risk	0.84	(0.90)	0.12	(0.20)
	Non-Risk Items	2.18	(1.01)	1.20	(0.80)
	Global distress	1.94	(0.96)	1.01	(0.68)
DES	Total score	34.97	(22.28)	13.51	(8.97)

Internal consistency

Cronbach's alpha was calculated for each of the BES scales and their five emotion subscales. The values are outlined in Table 24 below:

Table 24: Cronbach's alpha for each of the 21 item scales and their respective subscales.

Cronbach's alpha			
	BES Weekly	BES General	BES Coping
Total scale (21 items)	0.88	0.89	0.94
Subscale			
Anger	0.87	0.92	0.86
Sad	0.90	0.94	0.87
Disgust	0.93	0.94	0.89
Fear	0.92	0.94	0.87
Happy	0.89	0.94	0.84

Cronbach's alpha on the BES Weekly, General and Coping questionnaires, and their subscales, all exceeded 0.70; indicating excellent internal consistency and reliability

(Kline, 1999). Cronbach's alpha was also calculated for the three additional scales and the four subscales of the REQ. The REQ total scale and internal functional subscale demonstrated low reliability. These two scales were excluded from the analysis (See Table 25).

Table 25: Cronbach's alpha for the REQ subscales, CORE and PCL-C.

Measure	Number of items in scale	Cronbach's alpha
REQ		
Internal dysfunctional	5	0.81
Internal functional	5	0.66
External dysfunctional	5	0.82
External functional	5	0.85
CORE	34	0.93
PCL-C	17	0.97

Hypothesis 1: Higher levels of negative emotions and lower levels of happiness will be experienced by survivors of childhood sexual abuse, than a population with mental health difficulties who have not experienced childhood trauma. Furthermore, individuals who have experienced CSA will have more difficulty coping with emotions, experience more psychopathology and utilise less helpful emotional regulatory strategies.

Basic emotions

Self-reported emotions were compared across three versions of the BES (weekly, general and coping). Survivors of CSA reported significantly higher levels of all negative *state* emotions on the BES-Weekly scale than the NCT group (See Table 26). The CSA group (M=2.62, S.E=0.23) scored significantly lower on state happiness (t (49)=2.66, p=0.005, r=0.35) than the NCT group (M=1.76, S.E.=0.22).

On the BES General scale, the CSA group scored (disgust, M=4.39, S.E=0.30 and sad, M=4.36, S.E=0.32), significantly higher on BES-G disgust (t(45.38)=5.99, p=<0.0025, r=0.66) and BES-G Sad (t(49)=2.83, p<0.0025, r=0.37) than the NCT group (disgust, M=2.12, S.E=0.22, Sad, M=3.04, 0.33) at the adjusted alpha level. The two groups did not differ significantly on any of the BES-coping subscales. Although the CSA group appears to experience significantly higher levels of negative emotions compared to the NCT group, there did not appear to be a significant difference between how either group cope with emotions.

Regulatory strategies including dissociation

Regulation of emotions was also compared across groups. REQ internal dysfunctional was the only REQ subscale statistically significance at the adjusted alpha level (See Table 27). The CSA group (M=3.06, S.E.=0.19) employed more internal dysfunctional emotion regulation strategies (t(45.38)=2.64, p=0.0055, r=0.36), than the NCT group (M=2.43, S.E=0.14). This finding was supported by the evidence that the CSA group (M=34.97, S.E=4.37) experienced significantly more (t(33.15)=4.54=p<0.0025, r=0.61) dissociation (which could also be considered an internal dysfunctional regulation strategy), than the NCT group (M=13.51, S.E=1.79).

Symptoms and functioning

As might be expected, the CSA group scored significantly higher with large effect sizes on all subscales of the PCL-C than the NCT group, indicating high levels of avoidance, hyperarousal and re-experiencing symptoms (See Table 27)**.** On the CORE, the CSA group also scored significantly higher on all subscales with medium to large effect sizes (see Table 27).

In summary, the results of the t-tests confirm the hypothesis that the CSA group experience significantly higher levels of negative emotions and lower levels of

happiness. Interestingly, there are no significant differences between difficulties coping with emotions and or use of emotion regulatory strategies although internal dysfunctional approached significance. The findings confirm the hypothesis that the CSA group is likely to experience higher levels of trauma symptoms and global distress.

Table 26: Independent samples t-tests for the BES scales (Bonferroni correction applied, p=<0.01*)

		Levene's Test for Equality of Variances			T-test for equality of means				
	Mean	Standard Error	F	Sig	t	Df	Sig. (1-tailed)	Mean Difference	Effect size
BES-W HAPPY			0.001	0.97	-2.66	49	**0.005**	-1.01	0.35
CSA	3.72	0.25							
Non CSA	4.74	0.28							
BES-W DISGUST			4.24	0.04	5.22	45.13	**<0.0025***	2.01	0.61
CSA	3.90	0.31							
Non CSA	1.88	0.22							
BES-W FEAR			0.52	0.47	2.71	49	**0.0045***	1.13	0.36
CSA	5.23	0.28							
Non CSA	4.09	0.31							
BES-W SAD			0.006	0.93	3.49	49	**0.0005***	1.46	0.44
CSA	4.04	0.30							
Non CSA	2.58	0.28							
BES-W ANGER			0.03	0.85	3.62	49	**0.0005***	1.27	0.95
CSA	4.20	0.25							
Non CSA	2.93	0.24							
BES-G HAPPY			0.79	0.37	2.63	49	**0.005***	0.86	0.35
CSA	2.62	0.23							
Non CSA	1.76	0.22							
BES-G DISGUST			5.39	0.02	5.99	45.38	**<0.0025***	2.26	0.66
CSA	4.39	0.30							
Non CSA	2.12	0.22							
BES-G FEAR			1.54	0.22	1.82	49	0.035	0.80	0.25
CSA	5.22	0.28							
Non CSA	4.42	0.33							
BES-G SAD			0.08	0.76	2.83	49	**0.0035***	1.32	0.37
CSA	4.36	0.32							
Non CSA	3.04	0.33							
BES-G ANGER			0.35	0.55	2.38	49	0.01	0.98	0.32
CSA	4.28	0.30							
Non CSA	3.30	0.27							
BES-C HAPPY			0.79	0.37	2.63	49	**0.005***	0.86	0.35

CSA	2.62	0.23							
Non CSA	1.76	0.22							
BES-C DISGUST			2.94	0.09	1.83	49	**0.0035***	0.77	0.25
CSA	4.70	0.25							
Non CSA	3.93	0.33							
BES-C FEAR			<0.0005	0.99	0.82	48.83	0.20	0.30	0.11
CSA	4.75	0.25							
Non CSA	4.45	0.26							
BES-C SAD			.76	0.38	1.41	49	0.08	0.58	0.19
CSA	4.68	0.26							
Non CSA	4.10	0.31							
BES-C ANGER			.94	0.33	1.21	49	0.11	0.50	0.17
CSA	4.43	0.25							
Non CSA	3.93	0.32							

Table 27: Independent samples t-test for the measures of emotion regulation, dissociation, PTSD and general psychological distress.

		Levene's Test for Equality of Variances			T-test for equality of means				
	Mean	Standard Error	F	Sig	t	df	Sig. (1-tailed)	Mean Difference	Effect size
REQ INTERNAL DYSFUNCTIONAL			4.33	0.04	2.64	45.38	**0.0055***	0.62	0.36
CSA	3.06	0.19							
Non CSA	2.43	0.14							
REQ EXTERNAL FUNCTIONAL			0.54	0.46	-1.66	49	0.05	-0.36	0.23
CSA	2.50	0.14							
Non CSA	2.87	0.16							
REQ EXTERNAL DYSFUNCTIONAL			0.66	0.04	0.86	49	0.19	0.15	0.12
CSA	1.70	0.12							
Non CSA	1.55	0.13							
DES			25.2	0.00	4.54	33.1	**<.00025***	21.45	0.61
CSA	34.97	4.37							
Non CSA	13.51	1.79							
PCL-C TOTAL			6.02	0.01	5.78	43.9	**<.00025***	21.92	0.65
CSA	55.80	3.12							
Non CSA	33.88	2.14							
PCL-REEXPERIENCING			6.71	0.01	5.38	40.9	**<.00025***	7.05	0.64
CSA	16.57	1.12							
Non CSA	9.52	0.67							
PCL-C AVOIDANCE			2.31	0.13	4.48	49	**<.00025***	8.58	0.53
CSA	22.42	1.48							
Non CSA	13.84	1.19							
PCL-C HYPERAROUSAL			3.85	0.05	5.23	49	**<.00025***	6.28	0.59
CSA	16.80	0.97							
Non CSA	10.52	0.68							
CORE-GLOBAL DISTRESS			4.58	0.03	4.03	45.3	**<.00025***	0.93	0.51
CSA	1.94	0.18							
Non CSA	1.01	0.13							

CORE GLOBAL DISTRESS-RISK			2.06	0.15	3.82	49	**<.00025***	0.98	0.47
CSA	.83	0.19							
Non CSA	.12	0.16							
CORE SUBJECTIVE WELL-BEING			.553	0.46	3.44	49	**0.0005***	1.08	0.44
CSA	2.40	0.23							
Non CSA	1.32	0.20							
CORE PROBLEMS/SYMPTOMS			1.08	0.30	3.57	49	**0.0005***	1.00	0.45
CSA	2.36	0.21							
Non CSA	1.36	0.17							
CORE FUNCTIONING			2.54	0.11	3.87	49	**<.00025***	.92	0.48
CSA	1.93	0.18							
Non CSA	1.01	0.15							
CORE RISK			54.18	0.00	3.95	27.5	**<.00025***	.71	0.60
CSA	.83	0.17							
Non CSA	.12	0.04							

Hypothesis 2: Individuals who have experienced childhood sexual abuse will demonstrate greater levels of implicit disgust than a clinical population who have not experienced childhood sexual abuse. This will be evidenced by a stronger association between the self and disgust, as measured by response latencies on the IAT

There were no significant differences (t(47)=0.73, p=0.23, r=0.10) between groups on the IAT effect measure**.** However, examination of the IAT effect measure effect measure indicated that on average individuals in the CSA group (M=-0.007, S.E. =0.015) scored negatively, suggesting that they implicitly associated themselves with self-disgust. The mean scores for the NCT group (M=0.006, S.E=0.011) were closer to zero, but positively scored indicating that they associated themselves with both disgust and happiness; however, the higher IAT score indicated less of an implicit disgust self-concept than the CSA group.

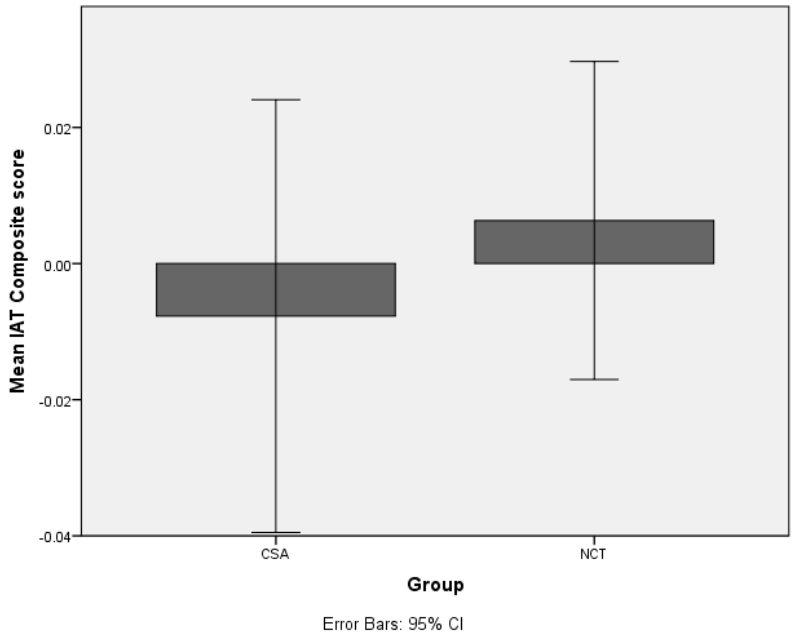


Figure 11: IAT examining implicit disgust (relative to happiness) in a group of individuals who have experienced childhood sexual abuse and a group who have experienced no trauma in childhood.

Hypothesis 3: Explicit trait disgust and implicit disgust will be associated with greater difficulties regulating and coping with emotions, increased trauma symptoms and global distress.

As there were no significant differences between groups on the IAT measure, the groups were combined to examine the relationship between implicit disgust and emotion and symptom measures. Correlations are outlined in Table 28.

At the Bonferroni corrected alpha level, the IAT did not correlate significantly with any of the emotion, emotion regulation or symptom measures.

Explicit trait disgust (BES-General) disgust was associated with all emotion subscales on the BES Weekly, General and Coping. Explicit trait disgust was also associated with three regulation strategies (internal dysfunctional and external functional and dysfunctional). Explicit trait disgust was associated with all subscales of the PCL-C and the CORE.

Participant perspectives:

The use of the IAT to gain understanding of emotional experience in a CSA and NCT population is relatively novel. For this reason, qualitative information on participant experience was collected to aid development of this task, and to consider the acceptability of the measure. Six participants consented to providing brief verbal feedback of their experience of participation. This data has not been subjected to qualitative analysis, but provides a flavour of participant perspectives. Several quotes are outlined below in Figure 12.

"I was very interested in the computer because…there was and I certainly can't explain it. You probably know far more than me, but there was definitely something going on in my brain, that I couldn't quite equate; so even though I was pressing the answers and they felt right, I couldn't… I knew something was happening, so that was fascinating." **Participant 4**

"It has been interesting; it will be interesting to see the outcome." **Participant 6**

"It's got me thinking, even though I can sit and talk to a counsellor, I can still be quite emotionally detached from it, but today looking at them has made me start to think about things. The reason I think it is helpful is because, obviously what you will give back to the counsellor about my own experiences and how I feel, and hopefully we can work together. That's part of the reason I wanted to do, I wanted to see if there were issues or things I was avoiding." **Participant 13**

Figure 12: Participant quotes about the use of the IAT

Table 28: Summary of Pearson correlations (Bonferroni correction applied.) *Significant at the 0.01 level

	BES-W DISGUST	BES –W ANXIETY	BES-W HAPPY	BES-W SAD	BES-W ANGER
IAT effect measure	-0.23 0.12	**-0.30** **0.03**	0.15 0.27	-0.24 0.09	**-0.28** **0.05**
BES-G Disgust	**0.92*** **<0.0005**	**0.69*** **<0.0005**	**-0.61*** **<0.0005**	**0.77*** **<0.0005**	**0.68*** **<0.0005**
	BES- G DISGUST	**BES- G ANXIETY**	**BES-G HAPPY**	**BES-G SAD**	**BES-G ANGER**
IAT effect measure	-0.24 0.09	-0.05 0.68	-0.25 0.08	-0.27 0.05	-0.19 0.18
BES-G Disgust		**0.45*** **0.001**	**0.67*** **<0.0005**	**0.80*** **<0.0005**	**.683*** **<0.0005**
	BES- C DISGUST	**BES- C ANXIETY**	**BES-C HAPPY**	**BES-C SAD**	**BES-C ANGER**
IAT effect measure	-0.05 0.69	-0.24 0.08	-0.05 0.68	-0.15 0.29	-0.09 0.51
BES-G Disgust	**0.52*** **<0.0005**	**0.42*** **0.002**	**0.45*** **0.001**	**0.46*** **0.001**	**0.51*** **<0.0005**
	REQ internal dysfunctional	**REQ external functional**	**REQ external dysfunctional**	**DES**	**CORE RISK**
IAT effect measure	-0.10 0.47	-0.06 0.67	-0.04 0.76	-0.24 0.09	-0.23 0.09
BES-G Disgust	**0.73*** **<.0005**	**-0.41*** **0.002**	**0.41*** **0.003**	**0.66*** **<0.0005**	**0.65*** **<0.0005**
	PCL-C TOTAL	**PCL-C RE-EXPERIENCING**	**PCL-C AVOIDANCE**	**PCL-C HYPERAROUSAL**	**CORE FUNCTIONING**
IAT effect measure	-0.31 0.02	-0.26 0.06	-0.30 0.03	-0.27 0.06	-0.16 0.25
BES-G Disgust	**0.82*** **<0.0005**	**0.64*** **<0.0005**	**0.79*** **<0.0005**	**0.81*** **<0.0005**	**0.83*** **<0.0005**
	CORE GLOBAL DISTRESS	**CORE GLOBAL DISTRESS-RISK**	**CORE WELL-BEING**	**CORE PROBLEMS**	
IAT effect measure	-0.24 0.09	-0.23 0.10	-0.23 0.10	-0.27 0.05	
BES-G Disgust	**0.85*** **<0.0005**	**0.85*** **<0.0005**	**0.80*** **<0.0005**	**0.82*** **<0.0005**	

Note: IAT effect measures implicit disgust. BES-G Disgust measures explicit trait disgust

5.6 Discussion

This study compared the emotion profile and psychopathology of a sample of CSA survivors with a sample of mental health service users who reported no history of childhood trauma. The study also explored explicit trait disgust and implicit disgust measured using an IAT. The relationship between implicit and explicit disgust, basic emotions and psychopathology were examined. The results of each of the hypotheses tested will be discussed sequentially.

Hypothesis 1: The CSA group experienced significantly more negative emotions and lower levels of happiness consistent with the findings of previous research (Finucane et al., 2012). The CSA group also experienced higher levels of traumatic and general psychopathology, as measured by the PCL-C and the CORE. However, no significant differences were found between groups on measures of coping with emotions or emotion regulations strategies. The CSA group scored significantly higher on BES disgust Weekly and General subscales.

These results provide support for the emotional profile of a population of CSA survivors described in Study 1. They also provide further confirmation of the link between CSA and psychopathology (Spataro, Mullen, Burgess, Wells, & Moss 2004). It is interesting to note that a significant difference was not found between the groups on measures of coping with emotion or the REQ external functional and dysfunctional subscales. The REQ and the BES-coping scale are self-report measures. In particular, the REQ only captures the type of regulatory skills endorsed; it does not give an indication of the effectiveness of those regulatory skills. The regulatory skills employed by the CSA group may be less effective in the context they are used resulting in higher levels of negative emotions. The lack of a

significant difference between groups on the BES coping and REQ external scales may also be the result of low statistical power.

Hypothesis 2: This hypothesis suggested that the CSA group would experience higher levels of implicit disgust on the IAT than the NCT group. Although the results were consistent with a trend in this direction, the findings were not significant. This finding is surprising, as on self-report measures the CSA group scored significantly higher on disgust. The IAT is a measure of strength of association, and in this case disgust and happiness were the focus. Previous research has demonstrated that disgust and happy were at either ends of a spectrum of frequency of emotions experienced on the BES self-report measure, (Study 1); therefore, one might have expected to find a significant difference. The lack of a finding might reflect the self-report measure capturing a different concept than captured with the IAT.

In addition, one of the issues with using positive (happy) versus negative (disgust) emotion categories is that responses might reflect a general association between self and negative emotion, rather than specifically with disgust. This study employed two clinical populations who reported higher levels of negative emotions than non-clinical populations, therefore it cannot be ruled out that the lack of a significant difference was the result of both groups associating themselves with negative emotion, in general, rather than a positive emotion (versus the specific emotions of disgust and happiness).

Hypothesis 3: There are three parts to this hypothesis and each will be discussed in turn. Implicit disgust was not significantly correlated with self-report measures of emotion, suggesting that implicit and explicit disgust may reflect different cognitive and emotional

processes. These results are in keeping with two previous studies of implicit emotion. Rüsch et al. (2007, 2011) reported that implicit shame, anxiety and disgust self-concepts were not associated with explicit self-report measures of these emotions.

In Study 1, disgust was found to be a significant predictor of risk on the CORE. In the current study, partial support for a relationship between disgust and risk was found. Explicit trait disgust was associated with risk; however, there was no significant relationship between implicit disgust and risk.

Significant associations were found for explicit trait disgust and all subscales of the CORE and PCL-C. These results provide some support for the results of Study 1, where disgust was a predictor of the PCL-C total score and re-experiencing subscale, as well as all subscales of the CORE with exception of problems.

Limitations

Limitations of the study include a small sample size and unequal distribution of gender. Furthermore, little is known regarding specific diagnoses within the sample. The NCT group consisted of referrals to the psychology department, regardless of presenting mental health issue. It is, therefore, not possible to rule out the chance that there were similar presentations in each of the groups – e.g. the presence of borderline personality disorder – which may have been a factor in the lack of significant differences found on the IAT and coping measures. Although it was highlighted on the information sheet and consent form for the NCT group that they should not participate if they had a history of disclosed or non-disclosed childhood trauma, it is possible that the NCT group may have been contaminated

by individuals who experienced childhood trauma, but did not recognise it as such. There was no data collected on the nature of the abuse or any additional trauma for the CSA group.

There were a number of limitations related to the IAT. As mentioned previously, the use of target words which were both negative emotion words would have enabled differentiation between specific association to disgust versus general association to negative emotions. Furthermore, additional trials and blocks would likely have improved the accuracy of the task. The data from the IAT were analysed using the conventional scoring algorithm. An improved scoring algorithm exists, but unfortunately the data in this study were not appropriate to analyse using the improved algorithm (Greenwald, Nosek, & Banaji, 2003). Any future studies should ensure they have adequate trials in order to be able to make use of the more recent algorithm.

Clinical implications- recommendations for assessment, treatment and training:

In terms of assessment, the results highlight the importance of understanding the emotional experience of the individual in conceptualising the treatment focus. The completion of psychometric measures which explore emotional experience are likely to be clinically relevant. However, these findings also demonstrate that self-report measures may only serve to capture the 'explicit' emotional experience. The findings suggest that implicit and explicit emotions are likely to be two separate uncorrelated entities. The use of an implicit task may provide further understanding of an individual's implicit emotional experience. Participants of the current study provided qualitative feedback supporting the acceptability of such a task. An IAT is however, unlikely to be accessible to the majority of clinicians working in healthcare settings. Mauss & Robinson (2009) suggest that there is no "gold

standard" measure of emotion. Until there are further developments in the field of emotion measurement which are accessible, clinicians are likely to have to rely on their own judgement and clinical skills when considering the role of implicit emotions. Awareness that there may be emotions operating at an 'automatic' or implicit level is likely to be important in formulating and tailoring an intervention following psychological assessment.

The evidence for significantly higher levels of all negative emotions in the CSA group indicate greater complexity of emotional experience, yet there was no significant difference found for coping or regulating emotions. Higher levels of PTSD symptoms and general psychopathology in the CSA group associated with emotions, and in particular disgust is indicative of the need for emotion-focused therapies or modification to existing treatments for those individuals with more complex presentations. Power (2010) has highlighted that emotion is often neglected in cognitive behavioural therapies. There is evidence, however, that specific emotions can successfully be addressed in treatment; in particular, disgust and fear in the anxiety disorders (Olatunji, Lohr, Sawchuk, & Tolin, 2007; Smits, Telch, & Randall, 2002).

Furthermore, treatment should be guided by the route to emotion. Power and Dalgleish (2008) suggest that addressing these different emotion routes in therapy can result in fast or slow change processes. Addressing a fear related appraisal, which occurs at the schematic level, for example "People will hurt me", is likely to result in more rapid change than the fear at an associative level where the individual continues to feel threat in the company of people. Targeting appraisals which occur at the associative level is likely to be a slower process and behavioural techniques are likely to be the best avenue for therapy (Power &

Dalgleish, 2008). The findings from this study suggest that implicit disgust may be an important emotion to address at the associative level.

The therapeutic relationship is likely to be a fundamental tool in addressing the psychological sequelae of CSA, particularly at this level. The opportunity to experience a relationship which is non-judgmental, non-threatening and provides unconditional positive regard is likely to be a challenge to implicit or automatic disgust. It is important that therapeutic alliance is measured in future studies examining treatment outcome.

Previous research has also indicated that it may not only be important to match the route to emotion with the therapeutic approach but also to consider the best fit when considering emotion regulatory strategies (Beutler, Harwood, Kimpara, Verdirame & Blau 2011).

Beutler et al., (2011) conducted a meta-analysis examining patient coping style, psychotherapy focus and treatment outcome. The results suggest that externalising regulatory styles and symptoms focused treatment fit well together. In contrast, internalising emotion regulatory styles and insight focused treatment tend to work better in terms of outcomes. In relation to the current research, these findings would highlight the importance of assessing emotion regulatory style as well as emotions experienced and ensuring the appropriate fit in terms of treatment approach.

The findings also have relevance for staff training. An understanding of models of emotion, the likely impact of CSA on the emotional experience of the individual, thorough emotion related assessment (including emotion regulation style) and the development of therapeutic techniques with an emphasis on 'fit' with emotion profile are likely to be fundamental to promoting effective treatment of this population.

Future research

Feedback on the use of the IAT was positive from all participants. Many of them commented on how interesting it was to complete the task and there appeared to be an appreciation of the novelty of using this measure. The limitations of the design of the task in the study should be improved in future research. A future study might address the limitations of a positive/negative emotion paradigm that occurred in this study, by using a task similar to that of Rüsch et al. (2011) using the emotions of disgust and anxiety. It would have be interesting to repeat Rüsch et al.'s (2011) disgust and anxiety paradigm to examine whether the CSA group associate themselves with both these emotions, because this would fit with the basic emotions relating to PTSD evidenced in Journal Article 1.

In addition, all individuals recruited to the current study were involved in mental health services. A comparison which examines healthy controls is likely to be helpful in delineating the effect of implicit and explicit self-disgust in those with less psychopathology. There was no sexual abuse history taken so one cannot know if abuse was repeated, single incident or the age at which it occurred. CSA survivors often experience other forms of victimisation in childhood and adulthood, such as neglect or physical abuse, which are likely to contribute to psychopathology. A future study should take account of this variable.

In summary, the CSA group self-reported experiencing higher levels of negative emotions and increased traumatic and general psychopathology in comparison to a clinical group who had not experienced childhood trauma. There is evidence of the salience of self-reported disgust in this sample. Furthermore, although not significantly different between the two

groups, higher levels of implicit self-disgust concept were experienced in the CSA sample. This study provides further empirical support for the prominence of disgust in the emotional experience of individuals who have experienced CSA. It also highlights the importance of clinical interventions which address the impact of this emotion on psychological well-being.

Personal Reflections:

The process of data collection in this study highlighted the tension between the roles of researcher and clinician. The experience of working through questionnaires with participants created a shared space in which individual's often wanted to provide more information about their experiences than could be communicated via the questionnaires. Consequently, there were several disclosures which called upon clinical skills in assessing risk and handling such information sensitively, as well as making clear the boundaries relating to the role of researcher. The handling of disclosures highlighted the importance of good relationships and communication between the researcher, the participant and the referring healthcare professional.

Furthermore, regular supervision with a safe space to reflect upon the experiences of managing such disclosures and the progress of the study was invaluable. As the study progressed it became clear that it was not going to be possible to recruit adequate numbers and the initial methodology had to be revised. The original plan was to extend recruitment out of area. However, reflection on the process of data collection highlighted the importance of limiting data collection to an area where the support structures and professionals involved with participants, were familiar to the researcher so that any risk could be managed effectively. For this reason the study design was modified to include a comparison group and data collection remained within NHS Fife.

Bearing witness to another individual's trauma has the potential to impact on one's own well-being. The process of supervision, peer support, time for reflection and self-care were fundamental to ensuring my own emotional experience was regulated in an appropriate manner and ensure I had the resources to meet the demands of completing this study.

5.7 References

Acuna E., & Rodriguez C. A. (2004). "Meta analysis study of outlier detection methods in classification," Technical paper, Department of Mathematics, University of Puerto Rico at Mayaguez. Retrieved from: academic.uprm.edu/ eacuna/ paperout.pdf. In proceedings IPSI 2004, Venice, 2004.

Bach, P., & Hayes, S. C. (2002). The use of acceptance and commitment therapy to prevent the rehospitalization of psychotic patients: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, *70*, 1129–1139.

Bernstein, E. M., & Putnam, F. W. (1986). Development, reliability, and validity of a dissociation scale. *Journal of Nervous and Mental Disease*, *174*(12), 727–35.

Beutler, L. E., Harwood, T. M., Kimpara, S., Verdirame, D. & Blau, K. (2011). Coping Style. *Journal of Clinical Psychology, 67,* 176–183.

Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., Waltz, T., & Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire - II: A revised measure of psychological flexibility and experiential avoidance. *Behavior Therapy*, *42*(4)1–38.

Carlson, E. B., & Armstrong, J. (1994). Diagnosis and assessment of dissociative disorders. In S. J. Lynn & J. W. Rhue (Eds.), *Dissociation: Theoretical, clinical and research perspectives* (pp. 159–174). New York, NY: Guildford Press.

Carlson, E. B., Putnam, F. W., Ross, C. A., Torem, M., Coons, P., Dill, D. L., & Braun, B. G. (1993). Validity of the dissociative experiences scale in screening for multiple personality disorder: A multicenter study. *American Journal of Psychiatry*, *150*(7), 1030–1036.

Carolan, L. A., & Power, M. J. (2011). What basic emotions are experienced in bipolar disorder? *Clinical Psychology and Psychotherapy, 18*, 366–378.

Eifert, G. H., Forsyth, J. P., Arch, J., Espejo, E., Keller, M., & Langer, D. (2009). Acceptance and commitment therapy for anxiety disorders: Three case studies exemplifying a unified treatment protocol. *Cognitive Behavioral Practice*, *16*, 368–385.

Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion*, *6*, 169–200.

Evans, C. (2002). Towards a standardised brief outcome measure: psychometric properties and utility of the CORE-OM. *The British Journal of Psychiatry*, *180*, 51–60.

Finucane, A. M., Dima, A., Ferreira, N., & Halvorsen, M. (2012). Basic emotion profiles in healthy, chronic pain, depressed and PTSD individuals. *Clinical Psychology & Psychotherapy*, *19*, 14–24.

Fox, J. R. E., & Harrison, A. (2008). The relation of anger to disgust: The potential role of coupled emotions within eating pathology. *Clinical Psychology and Psychotherapy*, *15*, 86–95.

Gaudiano, B. A., & Herbert, J. D. (2006). Acute treatment of inpatients with psychotic symptoms using acceptance and commitment therapy: Pilot results. *Behaviour Research and Therapy, 44,* 415–437.

Gillanders, D. T., Bolderston, H., Dempster, M., Bond, F., Campbell, L., Kerr, S., Tansey, L., Clarke, S., Remington, B., Flaxman, P., Deans, G., Bastien, J., Moore, D., & Hermann, B. (2010). *The Cognitive Fusion Questionnaire: Further developments in measuring cognitive fusion.* Conference presentation at the *Association for Contextual Behavioral Science, World Congress VIII*, Reno, NV, June 2010.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74*(6), 1464–1480.

Greenwald, A. G., & Nosek, B. A. (2001). Health of the implicit association test at age 3. *Zeitschrift Fur Experimentelle Psychologie, 48*(2), 85–93.

Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology*, *85*, 197-216.

Griffin, D., & Bartholomew, K. (1994). Models of the self and other: Fundamental dimensions underlying measures of adult attachment. *Journal of Personality and Social Psychology, 67*, 430–445.

Grove, W. M., & Andreasen N. C. (1982). Simultaneous tests of many hypotheses in exploratory research. *Journal of Nervous and Mental Disease*, *170*, 3–8.

Hayes, S. C., & Pankey, J. (2002). Experiential avoidance, cognitive fusion, and an ACT approach to anorexia nervosa. *Cognitive and Behavioral Practice, 9*(3), 243–247.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behaviour change*. New York: Guilford.

Mauss, I.B., & Robinson, M.D. (2009). Measures of emotion: A review. *Cognition & Emotion, 23*, 209-237.

McKay, D. (2006). Treating disgust reactions in contamination-based obsessive–compulsive disorder. *Journal of Behavior Therapy and Experimental Psychiatry, 37*(1), 53–59.

Norman, G. (2010) Likert scales, levels of measurement and the ‘‘laws’’ of statistics. *Advances in Health Sciences Education, 15*, 625-32

Oatley, K., & Johnson-Laird, P. N. (1987). Towards a cognitive theory of emotions. *Cognition and Emotion*, *1*, 29–50.

Olatunji, B. O., Lohr, J. M., Sawchuk, C. N., & Tolin, D. F. (2007). Multimodal assessment of disgust in contamination-related obsessive-compulsive disorder. *Behaviour Research and Therapy, 45*, 263–276

Olatunji, B., & McKay, D. (2006). Introduction to the special series: Disgust sensitivity in anxiety disorders. *Journal of Behavior Therapy and Experimental Psychiatry, 37,* 1–3.

Power, M. J. (2006). The structure of emotion: An empirical comparison of six models. *Cognition and Emotion*, *20*, 694–713.

Power, M. J. (2010). *Emotion focused cognitive therapy*. United Kingdom: John Wiley & Sons

Power, M. J., & Dalgleish, T. (1997). *Cognition and emotion: From order to disorder*. Hove: Psychology Press.

Power, M. J., & Dalgleish, T. (2008). *Cognition and emotion: From order to disorder* (2nd ed.). Hove, UK: Taylor Francis.

Power, M. J., & Fyvie, C. (2012). The role of emotion in PTSD: Two preliminary studies. *Behavioural and Cognitive Psychotherapy.* Available on CJO 2012. doi:10.1017/S1352465812000148

Power, M. J., & Tarsia, M. (2007). Basic and complex emotions in depression and anxiety. *Clinical Psychology & Psychotherapy*, *14*, 19–31.

Phillips, K. F. V., & Power, M. J. (2007). A new self-report measure of emotion regulation in adolescents: The Regulation of Emotions Questionnaire. *Clinical Psychology & Psychotherapy*, *14*, 145–156.

Phillips, M. L., Senior, C., Fahy, T., & David, A. S. (1998). Disgust – the forgotten emotion of psychiatry. *British Journal of Psychiatry, 172*, 373–375.

Rozin, P., & Fallon, A. E. (1987). A perspective on disgust. *Psychological Review, 94,* 23–41.

Rozin, P., Haidt, J., & McCauley, C. R. (1993). Disgust. In M. Lewis & J. Haviland (eds.), *Handbook of emotions* (pp. 575–594). New York, NY: Guilford.

Rozin, P., Haidt, J., McCauley, C. R., & Imada, S. (1997). The cultural evolution of disgust. In H. M. Macbeth (ed.), *Food preferences and taste: Continuity and change* (pp. 65–82). Oxford, UK: Berghahn.

Rüsch, N., Lieb, K., Göttler, I., Hermann, C., Schramm, E., Richter, H., Gitta, A., Jacob, G., Corrigan, P., & Bohus, M. (2007). Shame and implicit self-concept in women with borderline personality disorder. *American Journal of, Psychiatry, 164*, 500–508.

Rüsch, N., Schulz, D., Valerius, G., Steil, R., Bohus, M., & Schmahl, C. (2011). Disgust and implicit self-concept in women with borderline personality disorder and posttraumatic stress disorder. *European Archives of Psychiatry and Clinical Neuroscience, 261*, 369–376.

Schmukle, S. C., & Egloff, B. (2004). Does the Implicit Association test for assessing anxiety measure trait and state variance? *European Journal of Personality, 18*, 438–494.

Shenk, C. E, Putnam, F. W., & Noll, J. G. (2012). Experiential avoidance and the relationship between child maltreatment and PTSD symptoms: Preliminary evidence. *Child Abuse & Neglect*, *36*, 118-126.

Smits, J. A. J., Telch, M. J., & Randall, P. K. (2002). An examination of the decline in fear and disgust during exposure-based treatment. *Behaviour Research and Therapy, 40*, 1243–1253.

Spataro, J., Mullen, P. E., Burgess, P. M., Wells, D. L., & Moss, S. A. (2004). Impact of child sexual abuse on mental health: Prospective study in males and females. *British Journal of Psychiatry*, *184*, 416–421.

Tull, M. T., Gratz, K. L., Salters, K., & Roemer, L. (2007). The role of experiential avoidance in post-traumatic stress symptoms and symptoms of depression, anxiety and somatization. *The Journal of Nervous & Mental Disease*, *192*(11), 754-761.

Twohig, M. P., Masuda, A., Varra, A. A., & Hayes, S. C. (2005). Acceptance and Commitment Therapy as a treatment for anxiety disorders. In S. M. Orsillo & L. Roemer (Eds.), *Acceptance and mindfulness-based approaches to anxiety: Conceptualization and treatment* (pp. 101–130). New York, NY: Kluwer/Springer-Verlag.

van Ijzendoorn, M. H., & Schuengel, C. (1996). The measurement of dissociation in normal and clinical populations: Meta-analytic validation of the dissociative experiences scale (DES). *Clinical Psychology Review, 16*(5), 365–382.

Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993). *The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility.* Paper presented at the *9th Annual Conference of the ISTSS*, San Antonio, TX.

Zettle, R. D., & Hayes, S. C. (1986). Dysfunctional control by client verbal behavior: The context of reason giving. *The Analysis of Verbal Behavior, 4*, 30–38.

CHAPTER 6: ADDITIONAL RESULTS

This chapter provides further detail regarding analyses that have not been described in Journal Article 1 and 2.

Study 1:

Higher levels of emotions traditionally considered negative (BES-Weekly and General scales) will be associated with higher levels of dysfunctional regulatory strategies on the REQ, and higher scores on symptom measures – i.e. PCL-C and CORE. Higher levels of happiness will predict higher levels of functional regulatory strategies and lower scores on symptom measures.

Correlation analyses revealed highly significant associations between all negative emotions, external dysfunctional regulatory strategies and internal dysfunctional regulatory strategies. High levels of happiness were associated with more frequent use of internal dysfunctional regulatory strategies and negatively associated with functional regulatory strategies (See Table 29).

Table 29: Correlations between basic emotions (BES-general) and emotion regulatory strategies (REQ)

	Disgust	**Happy**	**Fear**	**Sad**	**Anger**
Internal dysfunctional	0 59** <0.0005	0.27** 0.002	0.48** <0.0005	0.45** <0.0005	0.31** <0.0005
External dysfunctional	0.40** <.0005	0.13 0.08	0.18* 0.02	0.21* 0.01	0.46** <0.0005
Internal functional	0.01 0.45	-0.19* 0.02	-0.04 0.32	-0.10 0.13	-0.10 0.13
External functional	-0.47 0.31	-0.16* .042	0.02 0.38	-0.15 0.05	-0.03 0.37

Study 2:

An adult attachment measure (RQ) was used to compare attachment styles in the two groups. The Negative Emotion Coupling scale was also completed by participants in Study 2.

Higher levels of anxious and avoidant attachment will be observed in the CSA group compared to the NCT group. Anxious and avoidant attachment styles will be associated with high levels of implicit self-disgust and explicit trait disgust.

Assumptions of the t-test were met. There were no significant differences between the CSA group (M=2.34, S.E.=0.91) and the NCT group (M=0.84, S.E=1.06) on a measure of avoidant attachment (t (49)=1.07, p=0.288, r=0.15). The CSA group (M=1.96, S.E.=1.07) did not demonstrate a significantly more anxious attachment style (t (49)=1.78, p=0.81, r=0.24) than the NCT group (M=0.76, S.E=1.08).

There were no significant correlations between either anxious or avoidant attachment at the implicit disgust or explicit disgust level.

CHAPTER 7: ADDITIONAL DISCUSSION

7.1 Overview

The overall aim of the three studies in this thesis was to explore the emotional experience of a sample of survivors of childhood sexual abuse and consider how this might relate to psychopathology. This chapter builds upon the evidence so far, with an interpretation of the additional results (Chapter 6). The clinical implications of the findings are explored further. The limitations and strengths of this thesis (outwith those described previously in the journal articles) are discussed.

7.2 Summary of research

In this thesis, the application of the SPAARS model (Power & Dalgleish, 2008) has been tested in a population where there is evidence of PTSD but the nature of this syndrome has been considered different from other trauma populations, such as combat veterans. Of particular interest in this thesis, has been the role of disgust and its relationship with the psychological sequelae of CSA. This research has attempted to shed light on the role of implicit disgust. Understanding the prominent emotions in a clinical presentation can be used to guide treatment. Indeed, this approach has shown promise in the treatment of obsessive compulsive disorder where the assessment of disgust and fear directed treatment (McKay, 2006). Implicit disgust has been considered in view of the associative and schematic routes to emotion outlined by the SPAARS model (Power & Dalgleish, 2008)

7.3 Additional hypotheses

Additional hypotheses explored in Chapter 6, highlighted several other interesting findings. The finding that higher levels of happiness were associated with more frequent use of internal dysfunctional regulatory strategies and negatively associated with functional regulatory strategies is surprising. Intuitively, one might expect a positive emotion to be associated with functional regulatory strategies as these strategies might be employed to maintain the positive emotion. For example, "I concentrate on a pleasant activity" or "I telephone friends or family" would both be considered ways of prolonging a positive emotion. Hedonistic accounts of emotion would suggest that individuals want to feel good and therefore would use such strategies to maintain the feeling (Tugade & Fredrickson, 2006). There are three possible reasons that this might not be the case particularly in a sample of CSA survivors. Firstly, happiness may be experienced as an absence of negative emotion rather than a positive emotion, therefore, similar regulatory styles would be applied. Secondly, emotion regulatory strategies are developed in childhood and are often presumed to have an automatic component. It has been suggested that CSA causes developmental disruptions in the ability to regulate emotions (Briere & Elliot, 1994). It may be that as a result of childhood trauma, individuals are more inclined to develop what have been described as dysfunctional strategies to regulate all emotions including positive emotion and that these strategies are actually functional for the regulation of some emotion. Thirdly, the use of functional regulatory strategies might be dissonant with one's beliefs about self, others, or the world and therefore might be a less helpful strategy to employ. For example, functional regulatory strategies listed in the REQ include "I seek physical contact from friends or family" and "I concentrate on a pleasant activity". If childhood experiences have caused one to view physical contact as a threat then this would not be a helpful or functional regulatory strategy to employ. In addition, an invalidating childhood

environment, or experiences which have resulted in implicit disgust self-concept might mean that one does not feel deserving of concentrating on a pleasant activity and this approach would actually be likely to lead to a reduction of happiness. Further research using the REQ in childhood trauma populations is required to understand the particular strategies which serve as functional ways of regulating emotion.

Additional analyses using the data collected in Study 2 highlighted several issues pertinent to clinical interventions (See Appendix 23 for further detail). Attachment was included as a variable in this thesis because one of the key proposals of the SPAARS model is that one's relationship with their own emotion develops from the individual's learning history (Power & Dalgleish, 2008). Consequently, childhood experience and subsequent attachment style, particularly where interpersonal trauma exists, is likely to be a fundamental factor in understanding underlying appraisals and emotion. A thorough examination of this variable and the related literature base is beyond the scope of this thesis. However, the brief analysis of data has highlighted no significant differences between the groups in terms of anxious or avoidant attachment. The CSA group did have higher mean scores on both attachment styles. Anxious attachment was correlated with explicit disgust. It could be hypothesised that anxious attachment and the often associated belief that 'I am not okay, you're not okay' (Berne, 1972) is linked to appraisals relating to self-disgust (Bartholomew & Horowitz, 1991). Further research is required to clarify this finding.

7.6 Findings in the context of the SPAARS model

One of the challenges of a model as expansive as SPAARS is testability and gaining evidence for the particular constituents of the model and how these are proposed to operate in tandem. This thesis did not attempt to test the model per se, but the findings provide some support for particular aspects of the model (Power & Dalgleish, 2008). The

exploratory factor analyses supported a five basic emotion structure consisting of anger, sadness, fear, disgust and happiness. Furthermore, the proposal of the SPAARS model that emotional disorders can be predicted by these five emotions was supported by the finding that sadness, disgust and fear predicted PTSD symptoms (Power & Dalgleish, 2008). The idea that there may be a family of PTSD type psychological reactions which are similar in the emotion non-specific component and differ in terms of the emotion specific component was also supported by the predictors of PTSD (Dalgleish & Power, 2004). In Study 2, there was evidence that implicit and explicit disgust were two separate uncorrelated entities. This may provide support for the separate routes to emotion outlined in the SPAARS model, namely the schematic level and the associative levels (Power & Dalgleish, 2008). These findings add to existing support for the model in understanding psychopathology (Carolan & Power, 2011; Finucane *et al.,* 2012; Fox & Froom, 2009; Power & Fyvie, 2012; Power & Tarsia, 2007).

7.7 Acceptance and commitment therapy processes

Cognitive fusion and experiential avoidance were also examined (see Appendix 23). Previous research has shown that female survivors of CSA are more likely to use avoidance related coping strategies to deal with distressing thoughts and feelings (Marx & Sloan, 2002; Poluny & Follette, 1995). In this study the CSA group showed significantly higher levels of experiential avoidance than the NCT group. Individuals who use experiential avoidance as a coping strategy are more likely to experience psychological distress (Plumb, Orsillo & Luterek, 2004). Marx and Sloan (2002) found that avoidance mediates the relationship between a history of CSA and psychological difficulties. In terms of ACT processes, this finding would suggest that it is not the experience of CSA that leads to psychological difficulties but rather how one relates to internal experiences, for example

attempting to suppress or control them. The finding that explicit disgust was associated with experiential avoidance as measured by the AAQ is therefore logical. If one experiences high levels of disgust, it is probable that attempts to avoid one's internal experience are increased. It would be interesting to explore this hypothesis further using a mediation analysis to understand the relationship between disgust, experiential avoidance and psychological distress.

The relationship between cognitive fusion and implicit disgust is also plausible. If one holds disgust-related beliefs and cognitions about the self as literally true (fusion), it is likely that response latencies on an IAT will be quicker when disgust-related terms appear on screen. Experiential avoidance could therefore be considered a way of controlling the experience of self-disgust as a consequence of cognitive fusion. In theory, the individual could become 'stuck' in a pattern of re-experiencing and avoidance consistent with the emotion non-specific component of PTSD (Dalgleish & Power, 2004). A caveat to this interpretation of the results is the high correlations (r=.73 and r=.71) previously observed between the CFQ-15 –cognitive fusion and AAQ-II-experiential avoidance measures, which could indicate conceptual overlap (Gillanders *et al.,* 2010).

The systematic review highlighted the lack of an ACT treatment study for psychological difficulties in survivors of CSA. The preliminary findings in the current study suggest such a treatment study is warranted.

7.8 Limitations of the research

Design: The use of cross-sectional designs does not allow one to generalize beyond the samples included; these studies would need to be repeated (with an appropriate design) to draw firm conclusions

Samples: There are also limitations associated with the sample size, particularly in Journal Article 2. In all three samples who participated in this study, there were a limited number of men. One of the reasons for this may be the under-reporting of CSA in men (Paine & Hansen, 2002). It might also reflect the referral process. Although it was made clear that men and women were included in the study, it is possible that assumptions were made by referrers about the study involving females only. Such assumptions are likely to have developed due to the evidence that female gender is a risk factor for traumatic experiences (Breslau, Chilcoat, Kessler & Davis, 1999; Leskin & Sheikh, 2002).

Research has shown that interpersonal traumas are rarely single incident events. It is possible that the symptoms reported and emotions experienced could relate to later life traumas. The potential for a mixture of multiple traumas and variable symptom presentations amongst the CSA samples included in this study allows only for conclusions to be drawn which highlight the common experience of CSA. Causal links cannot be made between CSA and psychopathology or emotional experience in this thesis.

Measurement: There are limitations associated with the measures used in this study. The PCL-C is not a measure of complex trauma. Indeed, the DSM-IV-TR criteria do not match the criteria for complex trauma (APA, 2000). This limits the conclusions that can be drawn about the emotional predictors of complex trauma in this study.

The CORE can be used to gauge the complexity of presenting problems (Barkham, Gilbert, Connell, Marshall & Twigg, 2006). It is not a diagnostic tool. The predictors of the CORE in the regression analyses cannot therefore be deemed predictors of a specific emotional disorder. However, in moving away from a diagnostic approach towards a broader

conceptualization of emotional difficulties, the findings in Study 1 do provide information about predictors of emotional distress and symptoms.

Methodological limitations associated with the IAT: There were no significant associations between the implicit disgust and psychopathology. There are two possible explanations for these findings. The first is that implicit self-disgust is different from self-reported disgust and so the measures are tapping into two separate processes. This would fit with existing dual process theories of automatic and controlled or effortful processes (Gyurak, Gross & Etkin, 2011; Power & Dalgleish, 2008). In addition, it is possible that implicit disgust is not associated with psychopathology. However, previous research has demonstrated significant correlations between shame prone implicit self-concept as measured by the IAT and scores on measures of self-esteem, quality of life, and anger-hostility in a population of individuals diagnosed with BPD, social phobia and healthy controls (Rüsch *et al.,* 2007). A second possible explanation for the lack of significant findings relates to the design of the task. The study would have benefited from additional counterbalanced blocks. The task had no minimum response time and there were no error messages for slow responding. The task was designed in this way to reduce potential stress related to participation. However, this design may not have encouraged participants to respond as quickly as they might otherwise have and so resulted in slower response latencies. Finally, the small sample size in Journal Article 2 may have resulted in a false negative finding.

7.9 Strengths of the research

Although sample size has been discussed as a limitation of the study, the sample size in this research is a relative strength when compared to other studies of CSA survivors. Many published studies involving trauma populations have smaller sample sizes. Nine of the 23

papers (39%) included in the systematic review had samples of less than 45 (range n =5-42; Clarke & Llewelyn, 1994; Edmund & Rubin, 2004; Freedman & Enright, 1996; Kimbrough *et al.,* 2010; McIntosh *et al.,* 2008; Price, 2004; 2007; Romano & De Luca, 2005; Steil *et al.,* 2011,). Ideally, this research would have recruited larger numbers of survivors of CSA. However, the limitations of the clinical setting and time frame made this difficult. Furthermore, a non-clinical control group would have been useful in helping disentangle findings which reflect the clinical nature of the two samples included versus those which are related specifically to childhood trauma.

In Journal Article 2, feedback regarding participation was positive, particularly with respect to the IAT. Collecting qualitative information about the experience of participation allows for the refinement of the task and assists in considering future permutations of the task. Importantly, this research provided useful insight into the applicability of a theoretical model of normal and disordered emotion with implications for future therapy. There are a number of significant findings which can be built upon in future studies.

7.10 Clinical implications of the research

The findings of both empirical studies and the systematic review have potentially important implications for psychological interventions. Power and Dalgleish (2008) suggest that addressing these different emotion routes in therapy can result in fast or slow change processes. Addressing a fear related appraisal, which occurs at the schematic level, for example “People will hurt me”, is likely to result in more rapid change than the fear at an associative level where the individual continues to feel threat in the company of people. Targeting appraisals which occur at the associative level is likely to be a slower process and behavioural techniques are likely to be the best avenue for therapy (Power & Dalgleish, 2008). Relating this to the findings of Study 1, it might be prudent for psychological

therapies to address sadness and rumination on appraisals of loss at the schematic level and use behavioural techniques to address automatic disgust and fear occurring at the associative level in addressing PTSD symptoms. The findings from Study 2 point to the possible utility of using cognitive defusion techniques to address implicit appraisals at the associative level. Addressing implicit disgust self-concept is likely to be a slow change process.

This thesis has highlighted that CSA is an interpersonal trauma and that emotions are experienced in relation to others. The therapeutic relationship is likely to be a fundamental tool in addressing the psychological sequelae of CSA, particularly at the associative level. The opportunity to experience a relationship which is non-judgmental, non-threatening and provides unconditional positive regard is likely to be a challenge to implicit or automatic disgust and fear. It is important that therapeutic alliance is measured in future studies examining treatment outcome, as well as the opportunity to acknowledge and reflect upon loss appraisals in therapy.

In Study 2, the CSA group was noted to have experienced high levels of dissociation relative to the NCT group. In line with the SPAARS model, dissociation is thought to be the result of an inhibitory process where the emotion 'module' is held separate. A therapeutic environment which allows this emotion to be felt and helps with regulation of emotions that are overwhelming is likely to aid the integration of the emotion.

In Journal Article 1, dysfunctional emotion regulation strategies were shown to predict symptomatology. This finding highlights the importance of addressing dysfunctional regulatory strategies in therapy. However, the finding that happiness is positively associated with dysfunctional regulatory strategies and negatively associated with functional regulatory strategies also highlights the need for a tentative approach to interventions which

aim to reduce dysfunctional emotion regulatory strategies. Clinical experience with this population suggests that individuals find it difficult to let go of dysfunctional regulatory strategies, and the results lend support to the notion that "people often feel worse before they feel better" when addressing dysfunctional emotion regulatory strategies (Catonguay et al., 1998).

The clinical implications of this thesis provide a foundation for future research examining treatment for survivors of CSA, particularly in a healthcare system where trauma focused initiatives are being considered (NHS Education for Scotland & Scottish Executive, 2011) and government led strategies are being developed to improve services for survivors of CSA (Survivor Scotland, 2012).

7.11 Future research

Confirmatory factor analyses should be conducted on the Basic Emotions Scale to and future analyses should extend to the utility of the scale in a broader complex trauma population

The finding that sadness was a significant predictor in PTSD symptomatology should be explored further. The findings in Study 1 and 2 act as a starting point for testing the clinical application of the SPAARS model. A future treatment study could potentially explore the premise that emotion processing is multi-level. By examining the emotional predictors of pathology, it may be possible to test if treatments are effective at the different levels (i.e. associative, schematic and propositional). Building upon the findings in this study, one might use several treatment arms to assess the effectiveness of using cognitive therapy to treat sadness related appraisals or behavioural approaches to target associative disgust. A

dismantling study similar to Resick et al. (2008) who examined the effectiveness of components of CPT in treating PTSD is likely to be a promising approach.

Emotions are unlikely to be understood using one form of measurement (Mauss & Robinson, 2009). An IAT has much to offer in examining dual process theories of emotion.

This research has also briefly examined the ACT processes of cognitive fusion and avoidance. The finding that disgust was positively correlated with cognitive fusion and experiential avoidance provide further direction for research into the impact of ACT processes, how these might fit with emotion related appraisals, and the use of cognitive defusion techniques in addressing disgust self-concept.

Unfortunately, it was beyond the scope of this thesis to examine the influence of attachment styles in detail. The finding that explicit disgust is positively associated with anxious attachment style warrants further investigation.

In conclusion, this thesis has attempted to include a wide range of variables in exploring the impact of implicit and explicit emotion on psychopathology experienced by survivors of CSA. This research provides a starting point for an understanding of emotion and psychopathology in a sample of survivors of CSA in the context of the SPAARS model (Power & Dalgleish, 2008). The thesis has perhaps concluded with more questions than answers regarding the role of implicit and explicit emotion and its relationship to psychopathology, however, it is hoped that the findings provide direction for future research endeavours and therapeutic applications in this area.

REFERENCES

Allen, J. G., Huntoon, J., Fultz, J., Stein, H., Fonagy, P., & Evans, R. B. (2001). A model for brief assessment of attachment and its application to women in inpatient treatment for trauma related disorders. *Journal of Personality Assessment*, *76*, 421–447.

Arrindell, W. A., & van der Ende. J. (1985). An empirical test of the utility of the observations-to-variables ratio in factor and components analysis. *Applied Psychological Measurement, 9*, 165–178.

Arriola, K. R. J., T. Louden, T., Doldren, M. A., & Fortenberry, R. M. (2005). A meta-analysis of the relationship of child sexual abuse to HIV risk behavior among women *Child Abuse and Neglect*, *29*, 725–746.

Bach, P., & Hayes, S. C. (2002). The use of acceptance and commitment therapy to prevent the rehospitalization of psychotic patients: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, *70*, 1129–1139.

Barkham, M., Gilbert, N., Connell, J., Marshall. C., & Twigg, E. (2005) Suitability and utility of the CORE-OM and CORE-A for assessing severity of presenting problems in psychological therapy services based in primary and secondary care. *British Journal of Psychiatry*, *186*, 239-246

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, *61*, 226–244.

Batten, S. V., Follette, V. M., Rasmussen-Hall, M. L., & Palm, K. M. (2002). Physical and psychological effects of written disclosure among sexual abuse survivors. *Behavior Therapy, 33*(1), 107–122.

Bernstein, E. M., & Putnam, F. W. (1986). Development, reliability, and validity of a dissociation scale. *Journal of Nervous and Mental Disease, 174*(12), 727–735.

Beutler, L. E., Harwood, T. M., Kimpara, S., Verdirame, D. & Blau, K. (2011). Coping Style. *Journal of Clinical Psychology, 67,* 176–183.

Blake, D., Weathers, F., Nagy, L., Kaloupek, D., Klauminzer, G., Charney, D. et al. (1990). A clinician rating scale for assessing current and lifetime PTSD: The CAPS-1. *Behavior Therapy, 13*, 187-188.

Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., Waltz, T., & Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire - II: A revised measure of psychological flexibility and experiential avoidance. *Behavior Therapy*, *42* (4)1–38.

Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development.* New York, NY: Basic Books.

Breslau, N., Chilcoat, H. D., Kessler, R. C., & Davis, G. C. (1999). Previous exposure to trauma and PTSD effects of subsequent trauma: Results from the Detroit Area Survey of Trauma. *American Journal of Psychiatry, 156,* 902–907.

Brewin, C. R., Dalgleish, T., & Joseph, S. (1996). A dual representation theory of post-traumatic stress disorder. *Psychological Review, 103*, 670-686.

Brewin, C. R., Hunter, E., Carroll, F., & Tata, P. (1996). Intrusive memories in depression. *Psychological Medicine, 26*, 1271–1276.

Briere, J. (1988). The long-term clinical correlates of childhood sexual victimization. *Annals of the New York Academy of Sciences, 528*, 327-334.

Briere, J. (1996). Treatment outcome research with abused children: Methodological considerations in three studies. (Invited commentary). *Child Maltreatment, 1*, 348-351

Briere, , J., Elliot, D.M., Harris, J., & Cotman, A. (1995) Trauma symptom inventory: Psychometric characteristics and associations with childhood and adult trauma in clinical samples. *Journal of Interpersonal Violence, 10,* 387-401.

Browne, A., & Finkelhor, D. (1986). Impact of child sexual abuse: A review of the research. *Psychological Bulletin*, *99*, 66–77.

Cahill, C., Llewelyn, S. P., & Pearson, C. (1991). Treatment of sexual abuse which occurred in childhood: A review. *British Journal of Clinical Psychology, 30*(1), 1–12.

Callahan, K. L., Price, J. L., & Hilsenroth, M. J. (2004). A review of interpersonal-psychodynamic group psychotherapy outcomes for adult survivors of childhood sexual abuse. *International Journal of Group Psychotherapy, 54*(4), 491–519.

Carlson, E. B., & Armstrong, J. (1994). Diagnosis and assessment of dissociative disorders. In S. J. Lynn & J. W. Rhue (Eds.), *Dissociation: Theoretical, clinical and research perspectives* (pp.159–174). New York, NY: Guildford Press.

Carlson, E. B., Putnam, F. W., Ross, C. A., Torem, M., Coons, P., Dill, D. L., & Braun, B. G. (1993). Validity of the dissociative experiences scale in screening for multiple personality disorder: A multicenter study. *American Journal of Psychiatry, 150*(7), 1030–1036.

Carolan, L. A., & Power, M. J. (2011). What basic emotions are experienced in bipolar disorder? *Clinical Psychology and Psychotherapy, 18*, 366–378.

Chard, K. M. (2005). An evaluation of cognitive processing therapy for the treatment of posttraumatic stress disorder related to childhood sexual abuse. *Journal of Consulting and Clinical Psychology, 73*(5), 965–971.

Clarke, S., & Llewelyn, S. (1994). Personal constructs of survivors of childhood sexual abuse receiving cognitive analytic therapy. *British Journal of Medical Psychology, 67*(3), 273–289.

Cloitre, M., Koenen, K. C., Cohen, L. R., & Han, H. (2002). Skills training in affective and interpersonal regulation followed by exposure: A phase-based treatment for PTSD related to childhood abuse. *Journal of Consulting & Clinical Psychology, 70*(5), 1067–1074.

Cloitre, M., Stovall-McClough, R., Chase, K., & Han, H. (2005*).* Beyond PTSD: Emotion regulation and interpersonal problems as predictors of functional impairment in survivors of childhood abuse. *Behavior Therapy*, *36*(2), 119–124.

Cohen, J. (1969). *Statistical power analysis for the behavioral sciences*. New York, NY: Academic Press.

Cohen, J. (1988). *Statistical power analysis for the behavior sciences*. (2nd ed.). Hillsdale, NJ: Erlbaum.

Comrey, A. L. & Lee, H. B. (1992). *A first course in factor analysis*. Hillsdale, NJ: Erlbaum.

Conway, M., Mendelson, M., Giannopoulos, C., Csank, P. A. R., & Holm, S. L. (2004). Childhood and adult sexual abuse, rumination on sadness, and dysphoria. *Child Abuse & Neglect, 28*(4), 393–410.

Courtois, C. A., & Ford, J. D. (Eds.). (2009). *Treating complex traumatic stress disorders: An evidence-based guide*. New York, NY: Guilford Press.

Dalgleish, T., & Power, M. J. (2004). Emotion-specific and emotion-non-specific components of Posttraumatic Stress Disorder (PTSD): Implications for a taxonomy of related psychopathology. *Behaviour Research and Therapy, 42*, 1069- 1088

Dancey, C. P., & Reidy, J. G. (2007). *Statistics without maths for psychologists* (4th ed.). England: Prentice Hall.

de Jong, L., & Gorey, K.M. (1996). Short-term versus long-term group work with female survivors of childhood sexual abuse: A brief meta-analytic review. *Social Work with Groups*, *19*, 19–27.

Dechartres, A., Charles, P., Hopewell, S., Ravaud, P., & Altman, D. G. (2011). Reviews assessing the quality or the reporting of randomized controlled trials are increasing over time but raised questions about how quality is assessed. *Journal of Clinical Epidemiology, 64*(2), 136–144.

Echeburúa, E., De Corral, P., Zubizarreta, I., & Sarasua, B. (1997). Psychological treatment of chronic posttraumatic stress disorder in victims of sexual aggression. *Behavior Modification, 21*(4), 433–456.

Edmond, T., & Rubin, A. (2004). Assessing the long-term effects of EMDR: Results from an 18-month follow-up study with adult female survivors of CSA. *Journal of Child Sexual Abuse, 13*(1), 69–86.

Edmond, T., Rubin, A., & Wambach, K. G. (1999). The effectiveness of EMDR with adult female survivors of childhood sexual abuse. *Social Work Research, 23*(2), 103–116.

Ehlers, A., & Clark, D.M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour Research and Therapy*, *38*, 319-45.

Eifert, G. H., Forsyth, J. P., Arch, J., Espejo, E., Keller, M., & Langer, D. (2009). Acceptance and commitment therapy for anxiety disorders: Three case studies exemplifying a unified treatment protocol. *Cognitive Behavioral Practice*, *16*, 368–385.

Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion*, *6*, 169–200.

Ekman, P. (1999). Basic emotions. In T. Dalgleish, & M. J. Power. (Eds.). (1998). *Handbook of cognition and emotion.* Chichester: Wiley & Sons.

Elliott, D. M., & Briere, J. (1992). Sexual abuse trauma among professional women: Validating the Trauma Symptom Checklist-40 (TSC-40). *Child Abuse & Neglect: The International Journal, 16*, 391-398

Ellis, E. M., Atkeson, B. M., & Calhoun, K. S. (1982) An examination of differences between multiple- and single-incident victims of sexual assault. *Journal of Abnormal Psychology*, *91*, 221–224.

Evans, C. (2002). Towards a standardised brief outcome measure: Psychometric properties and utility of the CORE-OM. *The British Journal of Psychiatry*, *180*, 51–60.

Evans, C., Mellor-Clark, J., Margison, F., Barkham, M., McGrath, G., Connell, J. & Audin, K. (2000). Clinical outcomes in routine evaluation: The CORE-OM. *Journal of Mental Health*, *9*, 247–255.

Fauerbach, J. A., Richter, L., & Lawrence, J. W. (2002). Regulating acute posttrauma distress. Post-Myocardial Infarction Depression. *Journal of Burn Care & Rehabilitation, 23*, 249-257.

Field, A. (2005). *Discovering statistics using SPSS* (2nd ed.). London: Sage.

Finestone, H. M., Stenn, P., Davies, F., Stalker, C., Fry, R., & Koumanis, J. (2000). Chronic pain and health care utilization in women with a history of childhood sexual abuse. *Child Abuse & Neglect, 24*(4), 547–556.

Finkelhor, D. (1994). The international epidemiology of child sexual abuse. *Child abuse & Neglect*, *18*(5) 409-417.

Finucane, A. M., Dima, A., Ferreira, N., & Halvorsen, M. (2012). Basic emotion profiles in healthy, chronic pain, depressed and PTSD individuals. *Clinical Psychology & Psychotherapy*, *19*, 14–24.

Foa, A. B., Keane, T. M., & Friedman, M. J. (Eds.). (2000) *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies*. New York, NY: Guildford Press.

Foa, A. B., & Meadows, E. A. (1997). Psychosocial treatments for posttraumatic stress disorder: a critical review. *Annual Review of Psychology*, *48*, 449–80.

Foa, E. B., Steketee, G. S., & Rothbaum, B. O. (1989). Behavioral/cognitive conceptualizations of posttraumatic stress disorder. *Behavior Therapy*, *20,* 155-176.

Fox, J. R. E., & Harrison, A. (2008). The relation of anger to disgust: The potential role of coupled emotions within eating pathology. *Clinical Psychology and Psychotherapy*, *15*, 86–95.

Fox, J. R., & Froom, K. (2009). Eating disorders: A basic emotions perspective. *Clinical Psychology and Psychotherapy*, *16*(4), 328–326.

Freedman, S. R., & Enright, R. D. (1996). Forgiveness as an intervention goal with incest survivors. *Journal of Consulting and Clinical Psychology, 64*(5), 983–992.

Gaudiano, B. A., & Herbert, J. D. (2006). Acute treatment of inpatients with psychotic symptoms using Acceptance and Commitment Therapy: Pilot results. *Behaviour Research and Therapy, 44,* 415–437.

Gidycz, C. A., Coble, C. N., Latham, L., & Layman, M. J. (1993) Sexual assault experience in adulthood and prior victimization experiences: A prospective analysis. *Psychology of Women Quarterly*, *1*, 151–168.

Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism. A pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy*, *13*, 353–79.

Gillanders, D. T., Bolderston, H., Dempster, M., Bond, F., Campbell, L., Kerr, S., Tansey, L., Clarke, S., Remington, B., Flaxman, P., Deans, G., Bastien, J., Moore, D., & Hermann, B. (2010). *The Cognitive Fusion Questionnaire: Further developments in measuring cognitive fusion.* Conference presentation at the Association for Contextual Behavioral Science, World Congress VIII, Reno, NV, June 2010.

Gorsuch, R. L. (1983). *Factor analysis* (2nd ed.). Hillsdale, NJ: Erlbaum.

Green, S. B. (1991). How many subjects does it take to do a regression analysis? *Multivariate Behavioral Research, 26,* 499–510.

Greenwald, A. G., & Nosek, B. A. (2001). Health of the implicit association test at age 3. *Zeitschrift Fur Experimentelle Psychologie, 48*(2), 85–93.

Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology*, *85*, 197-216.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. K. L. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology, 74*, 1464–1480.

Griffin, D., & Bartholomew, K. (1994). Models of the self and other: Fundamental dimensions underlying measures of adult attachment. *Journal of Personality and Social Psychology, 67*, 430–445.

Grove, W. M., & Andreasen N. C. (1982). Simultaneous tests of many hypotheses in exploratory research. *Journal of Nervous and Mental Disease*. *170*, 3–8.

Guyatt, G. H., Oxman, A. D., Kunz, R., Bozek, J., Alonso-Coello, P., Rind, D. *et al.,* (2011). GRADE guidelines 6. Rating the quality of evidence-imprecision. *Journal of Clinical Epidemiology*, *64*(12), 1283–93.

Gyurak, A., Gross, J. J., & Etkin, A (2011). Explicit and implicit emotion regulation: A dual-process framework. *Cognition and Emotion 25*(3), 400-412

Hansen, N. B., Lambert, M. J., & Forman, E. M. (2006). The psychotherapy dose-response effect and its implications for treatment delivery services. *Clinical Psychology: Science and Practice, 9*(3), 329-343

Hayes, S. C., Barnes-Holmes, D., & Roche, B. (Eds.). (2001). *Relational frame theory: A post-Skinnerian account of human language and cognition*. New York, NY: Plenum Press.

Hayes, S. C., & Pankey, J. (2002). Experiential avoidance, cognitive fusion, and an ACT approach to anorexia nervosa. *Cognitive and Behavioral Practice, 9*(3), 243–247.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behaviour change*. New York: Guilford.

Herman, J. L. (1992) *Trauma and recovery: The aftermath of violence from domestic abuse to political terror.* New York, NY: Basic Books.

Herman, J. L. (1997). *Trauma and recovery: The aftermath of violence from domestic abuse to political terror.* New York, NY: Basic Books.

Higgins, J., & Green, S. (Eds.). (2011). *Cochrane handbook for systematic reviews of interventions, version 5.1.0.* (updated March 2011). The Cochrane Collaboration. Retrieved from *http://www.cochrane-handbook.org*

Hillberg, T., Hamilton-Giachritsis, C., & Dixon, L. (2011). A review of meta-analyses on the association between child sexual abuse and adult mental health difficulties: A systematic approach. *Trauma Violence Abuse, 12*(1) 38-49.

Horowitz, M. J., Siegel, B., Holen, A., Bonanno, G. A., Milbrath, C., & Stinson, C. H. (1997). Diagnostic criteria for complicated grief disorder. *American Journal of Psychiatry, 154*, 904–910.

Hulme, P. A. (2000). Symptomatology and health care utilization of women primary care patients who experienced childhood sexual abuse. *Child Abuse & Neglect, 24,* 1471–1484.

Juarascio, A. S., Forman, E. M., Timko, C. A., Herbert, J. D., Lowe, M. R., & Butryn, M. (2011). A theoretical investigation of the role of implicit internalization of the thin ideal in freshman weight gain, body image dissatisfaction, and disordered eating. *Eating Behaviors*, *12*, 207–213.

Kabat-Zinn , J. (1991). *Full catastrophe living: using the wisdom of your body and mind to face stress, pain, and illness*, Delta Trade Paperbacks

Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month *DSM–IV* disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry. 62,* 617–627.

Kessler, M. R. H., White, M. B., & Nelson, B. S. (2003). Group treatments for women sexually abused as children: A review of the literature and recommendations for future outcome research. *Child Abuse and Neglect, 27*(9), 1045–1061.

Kimbrough, E., Magyari, T., Langenberg, P., Chesney, M., & Berman, B. (2010). Mindfulness intervention for child abuse survivors. *Journal of Clinical Psychology*, *66*, 17–33.

Kline, P. (1993). *An easy guide to factor analysis*. London: Routledge.

Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, *33*, 159–174.

Leak, G. K., & Parsons, C. J. (2001). The susceptibility of three attachment style measures to socially desirable responding. *Social Behaviour and Personality*, *29*, 21–30.

Leskin, G., & Sheikh, J. (2002). Lifetime trauma history and panic disorder: Findings from the National Comorbidity Survey. *Journal of Anxiety Disorders, 16*(6), 599-603.

Levenson, R. W. (1992). Autonomic nervous system differences among emotions. *Psychological Science*, *3*, 23-27.

Linehan, M. (1993). *Cognitive behavioural treatment of borderline personality disorder.* New York, NY: Guilford Press.

Linehan, M. M., Comtois, K. A., Murray, A. M., Brown, M. Z., Gallop, R. J., Heard, H. L., Korslund, K. E., Tutek, D. A., Reynolds, S. K., & Lindenboim, N. (2006). Two-year randomized controlled trial and follow-up of dialectical behavior therapy vs. therapy

by experts for suicidal behaviors and borderline personality disorder. *Archives of General Psychiatry, 63*, 757–766.

Lubin, H. (2007). Group and Individual Therapy for Childhood Sexual Abuse Survivors. *International Journal of Group Psychotherapy, 57* (2), 257-262.

MacIntosh, H. B., & Johnson, S. (2008). Emotionally focused therapy for couples and childhood sexual abuse survivors. *Journal of Marital and Family Therapy, 34*(3), 298–315.

Mahalik, J. R., Good, G. E., & Englar-Carlson, M. (2003). Masculinity scripts, presenting concerns, and help seeking: Implications for practice and training. *Professional Psychology: Research and Practice*, *34,* 123–131.

Manglio, R. (2009). The impact of child sexual abuse on health: A systematic review of reviews. *Clinical Psychology Review*, *29*, 647–657.

Martsolf, D. S., & Draucker, C. B. (2005). Psychotherapy approaches for adult survivors of childhood sexual abuse: An integrative review of outcomes research. *Issues in Mental Health Nursing, 26*(8), 801–825.

Mauss, I.B., & Robinson, M.D. (2009). Measures of emotion: A review. *Cognition & Emotion, 23*, 209-237.

Marx, B., & Sloan, D. (2002). The role of emotion in the psychological functioning of adult survivors of childhood sexual abuse. *Behavior Therapy*, *33*, 563-577.

McDonagh, A., McHugo, G., Sengupta, A., Demment, C. C., Schnurr, P. P., Friedman, M., & Descamps, M. (2005). Randomized trial of cognitive-behavioral therapy for chronic

posttraumatic stress disorder in adult female survivors of childhood sexual abuse. *Journal of Consulting and Clinical Psychology, 73*(3), 515–524.

McKay, D. (2006). Treating disgust reactions in contamination-based obsessive–compulsive disorder. *Journal of Behavior Therapy and Experimental Psychiatry, 37*(1), 53–59.

Molnar, B. E., Buka, S. L., & Kessler, R. C. (2001). Child sexual abuse and subsequent psychopathology: Results from the National Comorbidity Survey. *American Journal of Public Health*, *91*, 753–760.

Neumann, D. A., Houskamp, B. M., Pollock, V. E., & Briere, J. (1996). The long-term sequelae of childhood sexual abuse in women: A meta-analytic review. *Child Maltreatment, 1*(1), 6–16.

Norman, G. (2010) Likert scales, levels of measurement and the ‘‘laws’’ of statistics. *Advances in Health Sciences Education, 15*, 625-32

Oatley, K., & Johnson-Laird, P. N. (1987). Towards a cognitive theory of emotions. *Cognition and Emotion*, *1*, 29–50.

Olatunji, B. O., Lohr, J. M., Sawchuk, C. N., & Tolin, D. F. (2007). Multimodal assessment of disgust in contamination-related obsessive-compulsive disorder. *Behavior Research and Therapy, 45*, 263–276.

Olatunji, B., & McKay, D. (2006). Introduction to the special series: Disgust sensitivity in anxiety disorders. *Journal of Behavior Therapy and Experimental Psychiatry, 37,* 1–3.

Owens, G. P., Pike, J. L., & Chard, K. M. (2001). Treatment effects of cognitive processing therapy on cognitive distortions of female child sexual abuse survivors. *Behavior Therapy, 32*(3), 413–424.

Paine, M. L., & Hansen, D. J. (2002). Factors influencing children to self-disclose sexual abuse. *Clinical Psychology Review*, *22*, 271-295.

Paivio, S. C., & Nieuwenhuis, J. A. (2001). Efficacy of emotion focused therapy for adult survivors of child abuse: A preliminary study. *Journal of Traumatic Stress, 14*(1), 115–133.

Pennbaker, J. W., & Susman, J. R. (1988). Disclosure of trauma and psychosomatic processes. *Social Science & Medicine, 26*(3), 327-332

Pereda, N., Guilera, G., Forns, M., & Gómez-Benito, J. (2009). The international epidemiology of child sexual abuse: A continuation of Finkelhor (1994). *Child Abuse & Neglect, 33*(6), 331–342.

Phillips, K. (2003). *Emotion regulation, psychological health & quality of life in children & adolescents.* (Unpublished Msc dissertation). University of Edinburgh, Edinburgh.

Phillips, K. F. V., & Power, M. J. (2007). A new self-report measure of emotion regulation in adolescents: The Regulation of Emotions Questionnaire. *Clinical Psychology & Psychotherapy*, *14*, 145–156.

Phillips, M. L., Senior, C., Fahy, T., & David, A. S. (1998). Disgust – the forgotten emotion of psychiatry. *British Journal of Psychiatry*, *172*, 373–375.

Plutchik, R. (1982). *The emotions.* New York, NY: Random House

Polusny, A., & Follette, V.M. (1995). Long-term correlates of child sexual abuse: Theory and review of the empirical literature. *Applied & Preventive Psychology, 4*,143-166.

Power, M. J. (2006). The structure of emotion: An empirical comparison of six models. *Cognition and Emotion, 20*, 694–713.

Power, M. J. (2010). *Emotion focused cognitive therapy*. United Kingdom: John Wiley & Sons.

Power, M. J., & Champion, L. A. (1986). Cognitive approaches to depression: a theoretical critique. *British Journal of Clinical Psychology*, *25*(3), 201–12.

Power, M. J., & Dalgleish, T. (1997). *Cognition and emotion: From order to disorder.* Hove: Psychology Press.

Power, M. J., & Dalgleish, T. (1999). Two routes to emotion: Some implications of multi-level theories of emotion for therapeutic practice. *Behavioural and Cognitive Psychotherapy, 27*, 129–141.

Power, M. J., & Dalgleish, T. (2008). *Cognition and emotion: From order to disorder* (2nd ed.). Hove, UK: Taylor Francis.

Power, M. J., & Fyvie, C. (2012). The role of emotion in PTSD: Two preliminary studies. *Behavioural and Cognitive Psychotherapy.* Available on CJO 2012, doi:10.1017/S1352465812000148

Power, M. J., & Tarsia, M. (2007). Basic and complex emotions in depression and anxiety. *Clinical Psychology & Psychotherapy*, *14*, 19–31.

Price, C. (2004). Characteristics of women seeking body-oriented therapy as an adjunct to psychotherapy during recovery from childhood sexual abuse. *Journal of Bodywork and Movement Therapies, 8*(1), 35–42.

Price, C. (2005) Body oriented therapy in recovery from childhood sexual abuse: an efficacy study. *Alternative therapies, 11*(5), 46-57.

Price, C. (2006). Body-oriented therapy in sexual abuse recovery: A pilot-test comparison. *Journal of Bodywork and Movement Therapies, 10*(1), 58–64.

Price, C. (2007) Dissociation reduction in body therapy during sexual abuse recovery. *Complementary therapies in Clinical Practice, 13*(2), 116-128.

Price, J. L., Hilsenroth, M. J., Callahan, K. L., Petretic-Jackson, P. A., & Bonge, D. (2004). A pilot study of psychodynamic psychotherapy for adult survivors of childhood sexual abuse. *Clinical Psychology and Psychotherapy, 11*(6), 378–391.

Price, J. L., Hilsenroth, M. J., Petretic-Jackson, P. A., & Bonge, D. (2001). A review of individual psychotherapy outcomes for adult survivors of childhood sexual abuse. *Clinical Psychology Review, 21*(7), 1095–1121.

Radford, L., Corral, S., Bradley, C., Fisher, H., Bassett, C., Howat, N., & Collishaw, S. (2011). *Child abuse and neglect in the UK today*. London: NSPCC.

Resick, P. A., Galovski, T. E., Uhlmansiek, M. O., Scher, C. D., Clum, G. A., & Young-Xu, Y. (2008). A randomized clinical trial to dismantle components of cognitive processing therapy for posttraumatic stress disorder in female victims of interpersonal violence. *Journal of Consulting and Clinical Psychology, 76*(2), 243-258.

Resick, P. A., Nishith, P., & Griffin, M. G. (2003). How well does cognitive–behavioral therapy treat symptoms of complex PTSD? An examination of child sexual abuse survivors within a clinical trial. *CNS Spectrums*, *8*, 340–355.

Resick, P. A., Nishith, P., Weaver, T. L., Astin, M. C., & Feuer, C. A. (2002). A comparison of cognitive-processing therapy with prolonged exposure and a waiting condition for the treatment of chronic posttraumatic stress disorder in female rape victims**.** *Journal of Consulting and Clinical Psychology*, *70*(4), 867-879.

Romano, E., & De Luca, R. V. (2005). Evaluation of a treatment program for sexually abused adult males. *Journal of Family Violence, 21*(1), 75–88

Roodman, A. A., & Clum, G. A. (2001). Revictimization rates and method variance: A meta-analysis. *Clinical Psychology Review, 21*(2), 183–204.

Rowan, A. B., Foy, D. W., Rodriguez, N., & Ryan, S. (1994). Posttraumatic stress disorder in adults sexually abused as children. *International Journal of Child Abuse and Neglect*, *18*(1), 51–61.

Rozin, P., & Fallon, A. E. (1987). A perspective on disgust. *Psychological Review, 94,* 23–41.

Rozin, P., Haidt, J., & McCauley, C. R. (1993). Disgust. In M. Lewis & J. Haviland (Eds.), *Handbook of emotions* (pp. 575–594). New York, NY: Guilford.

Rozin, P., Haidt, J., McCauley, C. R., & Imada, S. (1997). The cultural evolution of disgust. In H. M. Macbeth (ed.), *Food preferences and taste: Continuity and change* (pp. 65–82). Oxford, UK: Berghahn.

Rüsch, N., Lieb, K., Göttler, I., Hermann, C., Schramm, E., Richter, H., Gitta, A., Jacob, G., Corrigan, P., & Bohus, M. (2007). Shame and implicit self-concept in women with borderline personality disorder. *American Journal of, Psychiatry, 164*, 500–508.

Rüsch, N., Schulz, D., Valerius, G., Steil, R., Bohus, M., & Schmahl, C. (2011). Disgust and implicit self-concept in women with borderline personality disorder and posttraumatic stress disorder. *European Archives of Psychiatry and Clinical Neuroscience, 261*, 369–376.

Ryan, M., Nitsun, M., Gilbert, L., & Mason, H. (2005). A prospective study of the effectiveness of group and individual psychotherapy for women CSA survivors. *Psychology and Psychotherapy: Theory, Research and Practice, 78*(4), 465–479.

Ryan, R. E., & French, S. (2003). *Assessing long-term therapy for the treatment of adult survivors of childhood abuse*. Monash University, The Centre for Clinical Effectiveness. Retrieved from http://www.med.monash.edu.au/healthservices/cce/evidence/pdf/c/938.pdf

Sapnas, K. G., & Zeller, R. A. (2002). Minimizing sample size when using exploratory factor analysis for measurement. *Journal of Nursing Measurement*, *10*(2), 135–53.

Scharfe, E., & Bartholomew, K. (1994). Reliability and stability of adult attachment patterns. *Personal Relationships*, *1*, 23–43.

Schmukle, S. C., & Egloff, B. (2004). Does the Implicit Association test for assessing anxiety measure trait and state variance? *European Journal of Personality, 18*, 438–494.

Seligman, M. E. (1995). The effectiveness of psychotherapy: the consumer reports study. *American Psychologist*, *50*, 965–74.

Shin, L. M., McNally, R. J., Kosslyn, S. M., Thompson, W. L., Rauch, S. L., Alpert, N. M., Metzger, L.J…Pitman, R. (1999). Regional cerebral blood flow during script-driven imagery in childhood sexual abuse-related posttraumatic stress disorder: A positron emission tomographic investigation. *American Journal of Psychiatry*, *156*, 575–584.

Silver, R.C., Holman, E.A., McIntosh, D.N., Poulin, M. & Gil-Rivas, V. (2002) Nationwide longitudinal study of psychological responses to September 11. Journal of the American Medical Association. 288:1235–1244

Smith, D., Pearce, L., Pringle, M., & Caplan, R. (1995). Adults with a history of child sexual abuse: Evaluation of a pilot therapy service. *BMJ, 310*(6988), 1175–1178.

Smits, J. A. J., Telch, M. J., & Randall, P. K. (2002). An examination of the decline in fear and disgust during exposure-based treatment. *Behaviour Research and Therapy, 40*, 1243–1253.

Spanier, G. (1976) Measuring dyadic adjustment. *Journal of Marriage and the Family, 38,* 15-28

Spataro, J., Mullen, P. E., Burgess, P. M., Wells, D. L., & Moss, S. A. (2004). Impact of child sexual abuse on mental health: Prospective study in males and females. *British Journal of Psychiatry*, *184*, 416–421.

Spielberger, C. D., Gorsuch, R. L., Lushene, R., Vagg, P. R., & Jacobs, G. A. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.

Steil, R., Dyer, A., Priebe, K., Kleindienst, N., & Bohus, M. (2011). Dialectical behavior therapy for posttraumatic stress disorder related to childhood sexual abuse: A pilot study of an intensive residential treatment program. *Journal of Traumatic Stress*, *24*, 102–106.

Steil, R., Jung, K., & Stangier, U. (2011). Efficacy of a two-session program of cognitive restructuring and imagery modification to reduce the feeling of being contaminated in adult survivors of childhood sexual abuse: A pilot study. *Journal of Behavior Therapy and Experimental Psychiatry, 42*(3), 325–329.

Steine, I. M., Krystal, J. H., Nordhus, I. G., Bjorvatn, B., Harvey, A. G., Eid, J., Gronli, J., Milde, A. M., & Pallesen, S. (2012). Insomnia, nightmare frequency, and nightmare distress in victims of sexual abuse: The role of perceived social support and abuse characteristics. *Journal of Interpersonal Violence, 27(*9)1827-43.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). New York, NY: Harper Collins.

Tjaden, P., & Thoennes, N. (2000) *Full report of the prevalence, incidence, and consequences of violence against women: Findings from the National Violence Against Women survey . Research Report.* Washington, DC, and Atlanta, GA: U.S. Department of Justice, National Institute of Justice, and U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, NCJ 183781.

Talbot, N. L., Chaudron, L. H., Ward, E. A., Duberstein, P. R., Conwell, Y., O'Hara, M., Tu, X., Lu, N., He, H. & Stuart, S. (2011). A randomized effectiveness trial of interpersonal psychotherapy for depressed women with sexual abuse histories. *Psychiatric Services, 62*(4), 374–380.

Talbot, N. L., Conwell, Y., O'Hara, M. W., Stuart, S., Ward, E. A., Gamble, S. A., & Tu, X. (2005). Interpersonal psychotherapy for depressed women with sexual abuse histories: A pilot study in a community mental health center. *Journal of Nervous and Mental Disease, 193*(12), 847–850.

Taylor, J. E., & Harvey, S. T. (2010). A meta-analysis of the effects of psychotherapy with adults sexually abused in childhood**.** *Clinical Psychology Review*, *30*(6), 749–767.

Terhakopian, A., Sinaii, N., Engel, C. C., Schnurr, P. P. & Hoge, C. W. (2008). Estimating population prevalence of posttraumatic stress disorder: an example using the PTSD checklist. *Journal of Traumatic Stress*, *21*, 290–300.

Twohig, M. P., Masuda, A., Varra, A. A., & Hayes, S. C. (2005). Acceptance and Commitment Therapy as a treatment for anxiety disorders. In S. M. Orsillo & L. Roemer (Eds.), *Acceptance and mindfulness-based approaches to anxiety: Conceptualization and treatment* (pp. 101–130). New York, NY: Kluwer/Springer-Verlag.

van Ijzendoorn, M. H., & Schuengel, C. (1996). The measurement of dissociation in normal and clinical populations: Meta-analytic validation of the dissociative experiences scale (DES). *Clinical Psychology Review, 16*(5), 365–382.

Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993). *The PTSD checklist (PCL): Reliability, validity, and diagnostic utility.* Paper presented at the *9th Annual Conference of the ISTSS*, San Antonio, TX.

Williams, L. E., Bargh, J. A., Nocera, C., & Gray, J. R. (2009). On the unconscious regulation of emotion: Nonconscious reappraisal goals modulate emotional reactivity. *Emotion, 9,* 847-854.

Wolfe, J., & Kimerling, R. (1997). Gender issues in the assessment of posttraumatic stress disorder. In J. P. Wilson, & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 192–238). New York, NY: Guilford Press.

Zettle, R. D., & Hayes, S. C. (1986). Dysfunctional control by client verbal behavior: The context of reason giving. *The Analysis of Verbal Behavior, 4*, 30–38.

LIST OF APPENDICES

Appendix 1: Clinical Psychology Review Author Guidelines

ELSEVIER

CLINICAL PSYCHOLOGY REVIEW

AUTHOR INFORMATION PACK

TABLE OF CONTENTS

ISSN: 0272-7358

DESCRIPTION

Clinical Psychology Review publishes substantive reviews of topics germane to clinical psychology. Papers cover diverse issues including: psychopathology, psychotherapy, behavior therapy, cognition and cognitive therapies, behavioral medicine, community mental health, assessment, and child development. Papers should be cutting edge and advance the science and/or practice of clinical psychology.

Reviews on other topics, such as psychophysiology, learning therapy, experimental psychopathology, and social psychology often appear if they have a clear relationship to research or practice in clinical psychology. Integrative literature reviews and summary reports of innovative ongoing clinical research programs are also sometimes published. Reports on individual research studies and theoretical treatises or clinical guides without an empirical base are not appropriate.

AUDIENCE

Psychologists and Clinicians in Psychopathy

IMPACT FACTOR

2011: 7.071 © Thomson Reuters Journal Citation Reports 2012

ABSTRACTING AND INDEXING

BIOSIS
Behavioral Medicine Abstracts
Current Contents/Social & Behavioral Sciences
EMBASE
PsycINFO Psychological Abstracts
PsycLIT
Psyscan CP
Research Alert
Scopus
Social Sciences Citation Index
Social and Behavioural Sciences

EDITORIAL BOARD

GUIDE FOR AUTHORS

BEFORE YOU BEGIN

Ethics in publishing

For information on Ethics in publishing and Ethical guidelines for journal publication see http://www.elsevier.com/publishingethics and http://www.elsevier.com/ethicalguidelines.

Conflict of interest

All authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations within three years of beginning the submitted work that could inappropriately influence, or be perceived to influence, their work. See also http://www.elsevier.com/conflictsofinterest.

Submission declaration

Submission of an article implies that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis or as an electronic preprint, see http://www.elsevier.com/postingpolicy), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere including electronically in the same form, in English or in any other language, without the written consent of the copyright-holder.

Changes to authorship

This policy concerns the addition, deletion, or rearrangement of author names in the authorship of accepted manuscripts:
Before the accepted manuscript is published in an online issue: Requests to add or remove an author, or to rearrange the author names, must be sent to the Journal Manager from the corresponding author of the accepted manuscript and must include: (a) the reason the name should be added or removed, or the author names rearranged and (b) written confirmation (e-mail, fax, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed. Requests that are not sent by the corresponding author will be forwarded by the Journal Manager to the corresponding author, who must follow the procedure as described above. Note that: (1) Journal Managers will inform the Journal Editors of any such requests and (2) publication of the accepted manuscript in an online issue is suspended until authorship has been agreed.
After the accepted manuscript is published in an online issue: Any requests to add, delete, or rearrange author names in an article published in an online issue will follow the same policies as noted above and result in a corrigendum.

Copyright

Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (for more information on this and copyright see http://www.elsevier.com/copyright). Acceptance of the agreement will ensure the widest possible dissemination of information. An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.
Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. Permission of the Publisher is required for resale or distribution outside the institution and for all other derivative works, including compilations and translations (please consult http://www.elsevier.com/permissions). If excerpts from other copyrighted works are included, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has preprinted forms for use by authors in these cases: please consult http://www.elsevier.com/permissions.

Retained author rights

As an author you (or your employer or institution) retain certain rights; for details you are referred to: http://www.elsevier.com/authorsrights.

Role of the funding source
You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated. Please see http://www.elsevier.com/funding.

Funding body agreements and policies
Elsevier has established agreements and developed policies to allow authors whose articles appear in journals published by Elsevier, to comply with potential manuscript archiving requirements as specified as conditions of their grant awards. To learn more about existing agreements and policies please visit http://www.elsevier.com/fundingbodies.

Open access
This journal offers you the option of making your article freely available to all via the ScienceDirect platform. To prevent any conflict of interest, you can only make this choice after receiving notification that your article has been accepted for publication. The fee of $3,000 excludes taxes and other potential author fees such as color charges. In some cases, institutions and funding bodies have entered into agreement with Elsevier to meet these fees on behalf of their authors. Details of these agreements are available at http://www.elsevier.com/fundingbodies. Authors of accepted articles, who wish to take advantage of this option, should complete and submit the order form (available at http://www.elsevier.com/locate/openaccessform.pdf). Whatever access option you choose, you retain many rights as an author, including the right to post a revised personal version of your article on your own website. More information can be found here: http://www.elsevier.com/authorsrights .

Language and language services
Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who require information about language editing and copyediting services pre- and post-submission please visit http://webshop.elsevier.com/languageservices or our customer support site at http://support.elsevier.com for more information.

Submission
Submission to this journal proceeds totally online and you will be guided stepwise through the creation and uploading of your files. The system automatically converts source files to a single PDF file of the article, which is used in the peer-review process. Please note that even though manuscript source files are converted to PDF files at submission for the review process, these source files are needed for further processing after acceptance. All correspondence, including notification of the Editor's decision and requests for revision, takes place by e-mail removing the need for a paper trail.

PREPARATION

Use of wordprocessing software
It is important that the file be saved in the native format of the wordprocessor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the wordprocessor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier: http://www.elsevier.com/guidepublication). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork.
To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your wordprocessor.

Article structure
Manuscripts should be prepared according to the guidelines set forth in the Publication Manual of the American Psychological Association (6th ed., 2009).

Manuscripts should ordinarily not exceed 50 pages. Exceptions may be made with prior approval of the Editor in Chief for manuscripts including extensive tabular or graphic material, or appendices.

Appendices
If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

Essential title page information

Title. Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible. **Note: The title page should be the first page of the manuscript document indicating the author's names and affiliations and the corresponding author's complete contact information.**

Author names and affiliations. Where the family name may be ambiguous (e.g., a double name), please indicate this clearly. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name, and, if available, the e-mail address of each author within the cover letter.

Corresponding author. Clearly indicate who is willing to handle correspondence at all stages of refereeing and publication, also post-publication. **Ensure that telephone and fax numbers (with country and area code) are provided in addition to the e-mail address and the complete postal address.**

Present/permanent address. If an author has moved since the work described in the article was done, or was visiting at the time, a "Present address"' (or "Permanent address") may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Abstract

A concise and factual abstract is required (not exceeding 200 words). This should be typed on a separate page following the title page. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separate from the article, so it must be able to stand alone. References should therefore be avoided, but if essential, they must be cited in full, without reference to the reference list.

Graphical abstract
A Graphical abstract is optional and should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership online. Authors must provide images that clearly represent the work described in the article. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: Please provide an image with a minimum of 531 × 1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5 × 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. See http://www.elsevier.com/graphicalabstracts for examples.
Authors can make use of Elsevier's Illustration and Enhancement service to ensure the best presentation of their images also in accordance with all technical requirements: Illustration Service.

Highlights
Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and should be submitted in a separate file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). See http://www.elsevier.com/highlights for examples.

Keywords
Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abbreviations
Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Acknowledgements
Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Footnotes
Footnotes should be used sparingly. Number them consecutively throughout the article, using superscript Arabic numbers. Many wordprocessors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Table footnotes

Indicate each footnote in a table with a superscript lowercase letter.

Electronic artwork

General points

- Make sure you use uniform lettering and sizing of your original artwork.
- Save text in illustrations as 'graphics' or enclose the font.
- Only use the following fonts in your illustrations: Arial, Courier, Times, Symbol.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.
- Produce images near to the desired size of the printed version.
- Submit each figure as a separate file.

A detailed guide on electronic artwork is available on our website:
http://www.elsevier.com/artworkinstructions
You are urged to visit this site; some excerpts from the detailed information are given here.

Formats

Regardless of the application used, when your electronic artwork is finalised, please 'save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):
EPS: Vector drawings. Embed the font or save the text as 'graphics'.
TIFF: Color or grayscale photographs (halftones): always use a minimum of 300 dpi.
TIFF: Bitmapped line drawings: use a minimum of 1000 dpi.
TIFF: Combinations bitmapped line/half-tone (color or grayscale): a minimum of 500 dpi is required.
If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is'.
Please do not:

- Supply files that are optimised for screen use (e.g., GIF, BMP, PICT, WPG); the resolution is too low;
- Supply files that are too low in resolution;
- Submit graphics that are disproportionately large for the content.

Color artwork

Please make sure that artwork files are in an acceptable format (TIFF, EPS or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color on the Web (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. **For color reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article.** Please indicate your preference for color: in print or on the Web only. For further information on the preparation of electronic artwork, please see http://www.elsevier.com/artworkinstructions.
Please note: Because of technical complications which can arise by converting color figures to 'gray scale' (for the printed version should you not opt for color in print) please submit in addition usable black and white versions of all the color illustrations.

Figure captions
Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (**not** on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

Tables

Number tables consecutively in accordance with their appearance in the text. Place footnotes to tables below the table body and indicate them with superscript lowercase letters. Avoid vertical rules. Be sparing in the use of tables and ensure that the data presented in tables do not duplicate results described elsewhere in the article.

References

Citations in the text should follow the referencing style used by the American Psychological Association. You are referred to the Publication Manual of the American Psychological Association, Sixth Edition, ISBN 1-4338-0559-6, copies of which may be ordered from http://books.apa.org/books.cfm?id=4200067 or APA Order Dept., P.O.B. 2710, Hyattsville, MD 20784, USA or APA, 3 Henrietta Street, London, WC3E 8LU, UK. Details concerning this referencing style can also be found at http://humanities.byu.edu/linguistics/Henrichsen/APA/APA01.html

Citation in text
Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Web references
As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

References in a special issue
Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

Reference management software
This journal has standard templates available in key reference management packages EndNote (http://www.endnote.com/support/enstyles.asp) and Reference Manager (http://refman.com/support/rmstyles.asp). Using plug-ins to wordprocessing packages, authors only need to select the appropriate journal template when preparing their article and the list of references and citations to these will be formatted according to the journal style which is described below.

Reference style

References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters "a", "b", "c", etc., placed after the year of publication. **References should be formatted with a hanging indent (i.e., the first line of each reference is flush left while the subsequent lines are indented).**

Examples: Reference to a journal publication: Van der Geer, J., Hanraads, J. A. J., & Lupton R. A. (2000). The art of writing a scientific article. *Journal of Scientific Communications,* 163, 51-59.

Reference to a book: Strunk, W., Jr., &White, E. B. (1979). *The elements of style.* (3rd ed.). New York: Macmillan, (Chapter 4).

Reference to a chapter in an edited book: Mettam, G. R., & Adams, L. B. (1994). How to prepare an electronic version of your article. In B.S. Jones, & R. Z. Smith (Eds.), *Introduction to the electronic age* (pp. 281-304). New York: E-Publishing Inc.

Video data

Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the files in one of our recommended file formats with a preferred maximum size of 50 MB. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including ScienceDirect: http://www.sciencedirect.com. Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our video instruction pages at http://www.elsevier.com/artworkinstructions. Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

Supplementary data

Elsevier accepts electronic supplementary material to support and enhance your scientific research. Supplementary files offer the author additional possibilities to publish supporting applications, high-resolution images, background datasets, sound clips and more. Supplementary files supplied will be published online alongside the electronic version of your article in Elsevier Web products, including ScienceDirect: http://www.sciencedirect.com. In order to ensure that your submitted material is directly usable, please provide the data in one of our recommended file formats. Authors should submit the material in electronic format together with the article and supply a concise and descriptive caption for each file. For more detailed instructions please visit our artwork instruction pages at http://www.elsevier.com/artworkinstructions.

Submission checklist

The following list will be useful during the final checking of an article prior to sending it to the journal for review. Please consult this Guide for Authors for further details of any item.

Ensure that the following items are present:

One author has been designated as the corresponding author with contact details:

- E-mail address
- Full postal address
- Telephone and fax numbers

All necessary files have been uploaded, and contain:

- Keywords
- All figure captions
- All tables (including title, description, footnotes)

Further considerations

- Manuscript has been 'spell-checked' and 'grammar-checked'
- References are in the correct format for this journal
- All references mentioned in the Reference list are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Web)
- Color figures are clearly marked as being intended for color reproduction on the Web (free of charge) and in print, or to be reproduced in color on the Web (free of charge) and in black-and-white in print
- If only color on the Web is required, black-and-white versions of the figures are also supplied for printing purposes

For any further information please visit our customer support site at http://support.elsevier.com.

AFTER ACCEPTANCE

Use of the Digital Object Identifier

The Digital Object Identifier (DOI) may be used to cite and link to electronic documents. The DOI consists of a unique alpha-numeric character string which is assigned to a document by the publisher upon the initial electronic publication. The assigned DOI never changes. Therefore, it is an ideal medium for citing a document, particularly 'Articles in press' because they have not yet received their full bibliographic information. Example of a correctly given DOI (in URL format; here an article in the journal *Physics Letters B*):
http://dx.doi.org/10.1016/j.physletb.2010.09.059

When you use a DOI to create links to documents on the web, the DOIs are guaranteed never to change.

Proofs

One set of page proofs (as PDF files) will be sent by e-mail to the corresponding author (if we do not have an e-mail address then paper proofs will be sent by post) or, a link will be provided in the e-mail so that authors can download the files themselves. Elsevier now provides authors with PDF proofs which can be annotated; for this you will need to download Adobe Reader version 7 (or higher) available free from http://get.adobe.com/reader. Instructions on how to annotate PDF files will accompany the proofs (also given online). The exact system requirements are given at the Adobe site: http://www.adobe.com/products/reader/tech-specs.html.

If you do not wish to use the PDF annotations function, you may list the corrections (including replies to the Query Form) and return them to Elsevier in an e-mail. Please list your corrections quoting line number. If, for any reason, this is not possible, then mark the corrections and any other comments (including replies to the Query Form) on a printout of your proof and return by fax, or scan the pages and e-mail, or by post. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. We will do everything possible to get your article published quickly and accurately – please let us have all your corrections within 48 hours. It is important to ensure that all corrections are sent back to us in one communication: please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility. Note that Elsevier may proceed with the publication of your article if no response is received.

Offprints

The corresponding author, at no cost, will be provided with a PDF file of the article via e-mail. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. The PDF file is a watermarked version of the published article and includes a cover sheet with the journal cover image and a disclaimer outlining the terms and conditions of use.

AUTHOR INQUIRIES

For inquiries relating to the submission of articles (including electronic submission) please visit this journal's homepage. Contact details for questions arising after acceptance of an article, especially those relating to proofs, will be provided by the publisher. You can track accepted articles at http://www.elsevier.com/trackarticle. You can also check our Author FAQs (http://www.elsevier.com/authorFAQ) and/or contact Customer Support via http://support.elsevier.com.

Appendix 2: Clinical Psychology and Psychotherapy Author Guidelines

Clinical Psychology & Psychotherapy

Edited By: Paul Emmelkamp and Mick Power

Impact Factor: 1.656

ISI Journal Citation Reports © Ranking: 2011: 47/109 (Psychology Clinical)

Online ISSN: 1099-0879

Author Guidelines

For additional tools visit Author Resources - an enhanced suite of online tools for Wiley InterScience journal authors, featuring Article Tracking, E-mail Publication Alerts and Customized Research Tools.

- Copyright Transfer Agreement
- Permission Request Form
- Authors Professional & Ethical responsibilities

Author Guidelines

MANUSCRIPT SUBMISSION

Clinical Psychology and Psychotherapy operates an online submission and peer review system that allows authors to submit articles online and track their progress via a web interface. Please read the remainder of these instructions to authors and then visit

http://mc.manuscriptcentral.com/cpp and navigate to the *Clinical Psychology and Psychotherapy* online submission site. IMPORTANT: Please check whether you already have an account in the system before trying to create a new one. If you have reviewed or authored for the journal in the past year it is likely that you will have had an account created.

All papers must be submitted via the online system.

File types. Preferred formats for the text and tables of your manuscript are .doc, .docx, .rtf, .ppt, .xls. **LaTeX** files may be submitted provided that an .eps or .pdf file is provided **in addition** to the source files. Figures may be provided in .tiff or .eps format.

NEW MANUSCRIPT

Non-LaTeX users. Upload your manuscript files. At this stage, further source files do not need to be uploaded.
LaTeX users. For reviewing purposes you should upload a single .pdf that you have generated from your source files. You must use the File Designation "Main Document" from the dropdown box.

REVISED MANUSCRIPT

Non-LaTeX users. Editable source files must be uploaded at this stage. Tables must be on separate pages after the reference list, and not be incorporated into the main text. Figures should be uploaded as separate figure files.
LaTeX users. When submitting your revision you must still upload a single .pdf that you have generated from your revised source files. You must use the File Designation "Main Document" from the dropdown box. In addition you must upload your TeX source files. For all your source files you must use the File Designation "Supplemental Material not for review". Previous versions of uploaded documents must be deleted. If your manuscript is accepted for publication we will use the files you upload to typeset your article within a totally digital workflow.

COPYRIGHT AND PERMISSIONS

Authors **must** sign, scan and upload to the online system:

- To enable the publisher to disseminate the author's work to the fullest extent, the author must sign a Copyright Transfer Agreement transferring copyright in the article from the author to the publisher. Without this we are unable to accept the submission. A copy of the agreement to be used (which may be photocopied) can be found on the *Wiley InterScience* website and through links in the online submission system.
- Permission grants - if the manuscript contains extracts, including illustrations, from other copyright works (including material from on-line or intranet sources) it is the author's responsibility to obtain written permission from the owners of the

publishing rights to reproduce such extracts using the Wiley Permission Request Form .

The Copyright Transfer Agreement Form and the Permissions Request Form should be uploaded as "Supplementary files not for review" with the online submission of your article.

If you do not have access to a scanner, further instructions will be given to you after acceptance of the manuscript.

Submission of a manuscript will be held to imply that it contains original unpublished work and is not being submitted for publication elsewhere at the same time.

Title and Abstract Optimisation Information. As more research is read online, the electronic version of articles becomes ever more important. In a move to improve search engine rankings for individual articles and increase readership and future citations to Clinical Psychology and Psychotherapy at the same time please visit Optimizing Your Abstract for Search Engines for guidelines on the preparation of keywords and descriptive titles.

Manuscript style. The language of the journal is (British) English. All submissions must have a title, be printed on one side of A4 paper with numbered pages, be double-line spaced and have a 3cm wide margin all around. Illustrations and tables must be printed on separate sheets, and not incorporated into the text.

MANUSCRIPT STYLE

The language of the journal is English. 12-point type in one of the standard fonts: Times, Helvetica, or Courier is preferred. It is not necessary to double-line space your manuscript. Tables must be on separate pages after the reference list, and not be incorporated into the main text. Figures should be uploaded as separate figure files.

- During the submission process you must enter the full title, short title of up to 70 characters and names and affiliations of all authors. Give the full address, including email, telephone and fax, of the author who is to check the proofs.
- Include the name(s) of any **sponsor(s)** of the research contained in the paper, along with **grant number(s)**.
- Enter an **abstract** of up to 250 words for all articles [except book reviews]. An abstract is a concise summary of the whole paper, not just the conclusions, and is understandable without reference to the rest of the paper. It should contain no citation to other published work.
- All articles should include a **Key Practitioner Message** — 3-5 bullet points summarizing the relevance of the article to practice.
- Include up to six **keywords** that describe your paper for indexing purposes.

Research Articles: Substantial articles making a significant theoretical or empirical contribution.

Reviews: Articles providing comprehensive reviews or meta-analyses with an emphasis on clinically relevant studies.

Assessments: Articles reporting useful information and data about new or existing measures.

Practitioner Reports: Shorter articles that typically contain interesting clinical material.

Book Reviews: Published on invitation only. Critical summaries of recent books that are of general interest to readers of the journal.

Reference style. The APA system of citing sources indicates the author's last name and the date, in parentheses, within the text of the paper.

A. A typical citation of an entire work consists of the author's name and the year of publication.

Example: Charlotte and Emily Bronte were polar opposites, not only in their personalities but in their sources of inspiration for writing (Taylor, 1990). Use the last name only in both first and subsequent citations, except when there is more than one author with the same last name. In that case, use the last name and the first initial.

B. If the author is named in the text, only the year is cited.

Example: According to Irene Taylor (1990), the personalities of Charlotte. . .

C. If both the name of the author and the date are used in the text, parenthetical reference is not necessary.

Example: In a 1989 article, Gould explains Darwin's most successful. . .

D. Specific citations of pages or chapters follow the year.

Example: Emily Bronte "expressed increasing hostility for the world of human relationships, whether sexual or social" (Taylor, 1988, p. 11).

E. When the reference is to a work by two authors, cite both names each time the reference appears.

Example: Sexual-selection theory often has been used to explore patters of various insect matings (Alcock & Thornhill, 1983) . . . Alcock and Thornhill (1983) also demonstrate. . .

F. When the reference is to a work by three to five authors, cite all the authors the first time the reference appears. In a subsequent reference, use the first author's last name followed by *et al.* (meaning "and others").

Example: Patterns of byzantine intrigue have long plagued the internal politics of community college administration in Texas (Douglas *et al*., 1997) When the reference is to a work by six or more authors, use only the first author's name followed by *et al*. in the first and all subsequent references. The only exceptions to this rule are when some confusion might result because of similar names or the same author being cited. In that case, cite enough authors so that the distinction is clear.

G. When the reference is to a work by a corporate author, use the name of the organization as the author.

Example: Retired officers retain access to all of the university's educational and recreational facilities (Columbia University, 1987, p. 54).

H. Personal letters, telephone calls, and other material that cannot be retrieved are not listed in References but are cited in the text.

Example: Jesse Moore (telephone conversation, April 17, 1989) confirmed that the ideas. . .

I. Parenthetical references may mention more than one work, particularly when ideas have been summarized after drawing from several sources. Multiple citations should be arranged as follows.

Examples:

- List two or more works by the same author in order of the date of publication: (Gould, 1987, 1989)
- Differentiate works by the same author and with the same publication date by adding an identifying letter to each date: (Bloom, 1987a, 1987b)
- List works by different authors in alphabetical order by last name, and use semicolons to separate the references: (Gould, 1989; Smith, 1983; Tutwiler, 1989).

All references must be complete and accurate. Where possible the DOI for the reference should be included at the end of the reference. Online citations should include date of access. If necessary, cite unpublished or personal work in the text but do not include it in the reference list. References should be listed in the following style:

Journal Article

Gardikiotis, A., Martin, R., & Hewstone, M. (2004). The representation of majorities and minorities in the British press: A content analytic approach. *European Journal of Social Psychology, 34*, 637-646. DOI: 10.1002/ejsp.221

Book

Paloutzian, R. F. (1996). *Invitation to the psychology of religion* (2nd ed.). Boston: Allyn and Bacon.

Book with More than One Author

Natarajan, R., & Chaturvedi, R. (1983). *Geology of the Indian Ocean*. Hartford, CT: University of Hartford Press.
Hesen, J., Carpenter, K., Moriber, H., & Milsop, A. (1983). *Computers in the business world*. Hartford, CT: Capital Press. and so on.
The abbreviation *et al.* is not used in the reference list, regardless of the number of authors, although it can be used in the text citation of material with three to five authors (after the initial citation, when all are listed) and in all parenthetical citations of material with six or more authors.

Web Document on University Program or Department Web Site

Degelman, D., & Harris, M. L. (2000). *APA style essentials*. Retrieved May 18, 2000, from Vanguard University, Department of Psychology Website: http://www.vanguard.edu/faculty/ddegelman/index.cfm?doc_id=796

Stand-alone Web Document (no date)

Nielsen, M. E. (n.d.). *Notable people in psychology of religion*. Retrieved August 3, 2001, from http://www.psywww.com/psyrelig/psyrelpr.htm

Journal Article from Database

Hien, D., & Honeyman, T. (2000). A closer look at the drug abuse-maternal aggression link. *Journal of Interpersonal Violence, 15*, 503-522. Retrieved May 20, 2000, from ProQuest database.

Abstract from Secondary Database

Garrity, K., & Degelman, D. (1990). Effect of server introduction on restaurant tipping. *Journal of Applied Social Psychology, 20*, 168-172. Abstract retrieved July 23, 2001, from PsycINFO database.

Article or Chapter in an Edited Book

Shea, J. D. (1992). Religion and sexual adjustment. In J. F. Schumaker (Ed.), *Religion and mental health* (pp. 70-84). New York: Oxford University Press.

*The Digital Object Identifier (DOI) is an identification system for intellectual property in the digital environment. Developed by the International DOI Foundation on behalf of the publishing industry, its goals are to provide a framework for managing intellectual content, link customers with publishers, facilitate electronic commerce, and enable automated copyright management.

Illustrations. Upload each figure as a separate file in either .tiff or .eps format, the figure number and the top of the figure indicated. Compound figures e.g. 1a, b, c should

be uploaded as one figure. Grey shading and tints are not acceptable. Lettering must be of a reasonable size that would still be clearly legible upon reduction, and consistent within each figure and set of figures. Where a key to symbols is required, please include this in the artwork itself, not in the figure legend. All illustrations must be supplied at the correct resolution:

- Black and white and colour photos - 300 dpi
- Graphs, drawings, etc - 800 dpi preferred; 600 dpi minimum
- Combinations of photos and drawings (black and white and colour) - 500 dpi

The cost of printing **colour** illustrations in the journal will be charged to the author. The cost is approximately £700 per page. If colour illustrations are supplied electronically in either **TIFF** or **EPS** format, they **may** be used in the PDF of the article at no cost to the author, even if this illustration was printed in black and white in the journal. The PDF will appear on the *Wiley Online Library* site.

POST ACCEPTANCE

Further information. For accepted manuscripts the publisher will supply proofs to the corresponding author prior to publication. This stage is to be used only to correct errors that may have been introduced during the production process. Prompt return of the corrected proofs, preferably within two days of receipt, will minimise the risk of the paper being held over to a later issue. Once your article is published online no further amendments can be made. Free access to the final PDF offprint or your article will be available via author services only. Please therefore sign up for author services if you would like to access your article PDF offprint and enjoy the many other benefits the service offers

Author Resources. Manuscript now accepted for publication?

If so, visit out our suite of tools and services for authors and sign up for:

- Article Tracking
- E-mail Publication Alerts
- Personalization Tools

Cite EarlyView articles. To link to an article from the author's homepage, take the DOI (digital object identifier) and append it to "http://dx.doi.org/" as per following example: DOI 10.1002/hep.20941, becomes http://dx.doi.org/10.1002/hep.20941.

Appendix 3: Systematic Review search terms

Primary terms used in searches: Child* sex* abuse CSA Surviv* of child* sex* abuse adult child* sex* abuse and thera* treatment intervention Psychotherapy

Secondary search terms: Analytical psychotherapy Behaviour therapy Cognitive behaviour therapy cognitive therapy Stress inoculation training behaviour* therapy Behavioural psychotherapy Cognitive behavioural psychotherapy Bibliotherapy Brief therapy Solutions based brief therapy Cognitive psychotherapy Couple therapy Experiential psychotherapy Experimental psychotherapy Contextual therapy Gestalt therapy Individual psychotherapy Interpersonal Psychodynamic therapy Brief psychodynamic therapy Rational-Emotive therapy Supportive psychotherapy Therapeutic communities Transactional analysis Psychotherapists Psychological intervention Psychoanalysts hypnosis mindfulness energy emotional freedom technique eye movement desensitisation and reprocessing counselling psychotherap* MBCT CAT CBT DBT EMDR EFT therapeutic communit* inpatient treatment psychoanaly* psycho-analy* psycho-therap* IPT crisis intervention analytic cognitive schema* client cent*red outpatient individual day patient dialectic* eclectic expressive family inpatient intensive interpersonal manuali*ed mentali*ation hospitali*ation psychodynamic* psycho-dynamic* supportive talk* time limited short term self-help psychoeducational psychological psychosocial

Appendix 4: Systematic Review summary table of psychological sequelae examined and measures used.

Table 1: Systematic Review summary table of psychological sequelae examined and measures used.

Psychological Sequelae	Measurement	Studies
General psychological functioning/ symptoms	Symptom Checklist 90 revised (SCL-90-R. Derogatis, 1983)	Batten Chard weaver Clarke & Llewelyn Paivio & Nieuwenhuis (2001) Price (2006) Steil et al., (2011)
	Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983)	Kimbrough et al., 2010 Price (2005) Ryan et al., (2005)
	Target Complaints Discomfort Questionnaire (TC; Battle et al., 1966)	Paivio & Nieuwenhuis (2001)
	Clinical Interview (Ackerman, Hilsenroth, Baity & Blagys, 2000)	Price (2004)
	Structured Clinical Interview for DSM-IV-Patient Edition (SCID; Spitzer et al., 1994)	McDonagh et al., 2005 Steil et al., (2011)
	General Health Questionnaire (GHQ; Goldberg& Williams 1988).	Smith et al., (1995)
	Delusions, Symptoms & States Inventory (DSSI; Foulds and Bedford, 1975)	Smith et al., (1995)
	Medical Outcome Survey-36 SF-36; McHorney et al., 1993)	Talbot et al., (2005) Talbot et al., (2011)
	Structured Clinical Interview for DSM-IV Non Patient versions –I AND II (SCID-I; Spitzer, Williams & Gibbon; 1995; SCID-II, First et al., 1995)	Chard (2005) Steil et al., (2011)
PTSD/Trauma	Clinician Administered PTSD Scale (CAPS-SX; Blake et al., 1995) Clinician Administered PTSD Scale (Weathers et al., 2001)	Chard (2005) McDonagh et al., 2005 McIntosh and Johnson(2005) Owens, Pike & Chard (2001) Resick, P.A., & Nishith, P. et al. (2002) Resick, P.A., Nishith, P. & Griffin, M., (2003)
	Standardised Trauma Interview (Resick, Jordan, Girelli, Hutter & Marhoefer-Dvorak, 1988)	Chard (2005) Resick, P.A., Nishith, P. & Griffin, M., (2003)
	Sexual Abuse Exposure Questionnaire, Part 1(SAEQ; Rowan, Foy, Rodriguez & Ryan, 1994) x1	Chard (2005) Owens, Pike & Chard (2001)
	Modified PTSD Symptom Scale (MPSS; Falsetti, Resnick, Resick, & Kilpatrick, 1993) x1	Batten Chard, weaver Chard (2005) Talbot et al., (2011)
	PTSD Checklist (PCL; Weathers et al., 1994)	Kimbrough et al., 2010
	Impact of Events Scale (IES; Horowitz, Wilner & Alvarez, 1979)	Edmond et al (1999) Edmond & Rubin (2004) Paivio & Nieuwenhuis (2001)
	Evaluation of Lifetime Stressors Interview (ELS; Krinsley et al., 1994)	McDonagh et al., (2005)
	Trauma Symptoms Inventory (TSI; Briere, 1995)	McIntosh (2008) Resick, P.A., & Nishith, P. et al. (2002)

		Resick, P.A., Nishith, P. & Griffin, M., (2003)
	Crime Related PTSD Scale (CR-PTSD; Saunders & Kilpatrick, 1990)	Price (2005)
	Post-traumatic Diagnostic Scale (PDS; Griesel et al., 2006)	Steil et al., (2011a) Steil, Jung & Stangier (2011)
	Childhood Trauma Questionnaire (Bernstein et al., 1994)	Talbot et al., (2005) Talbot et al., (2011)
	Traumatic Life Events Questionnaire (Kubany et al., 2000)	Talbot et al., (2005) Talbot et al., (2011)
Dissociation	Dissociative Experiences Scale II (DES-II; Bernstein & Putnam, 1993)	Chard (2005) McDonagh et al., (2005) Price (2005) Price (2006)
Sexual history	Wyatt Sexual History Questionnaire (WSHQ; Wyatt, 1985	Batten
	Sexual Experiences Study (SES; Koss &Gidycz)	Batten
Affect: Depression	Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock &Erbaugh, 1961) Beck Depression Inventory (BDI; Beck, Steer & Brown, 1996)	Batten Chard, weaver Chard (2005) Clarke & Llewelyn Edmond et al (1999) Edmond & Rubin (2004) Freedman & Enright (1996) Kimbrough et al (2010) McDonagh et al., (2005) Resick, P.A., &Nishith, P. et al. (2002) Resick, P.A., Nishith, P. & Griffin, M., (2003) Ryan et al., (2005) Steil et al., (2011a) Talbot et al., (2005) Talbot et al., (2011)
	Positive and Negative Affect Schedule (PANAS; Watson, Clarke &Tellegen, 1988)	Batten
	Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960)	Talbot et al., (2005) Talbot et al., (2011)
Anger	Multidimensional Anger Inventory (Seigel, 1985)	Romano & De Luca (2005)
Anxiety	State-Trait Anxiety Inventory (STAI-S; Speilberger, 1983)	Edmond et al (1999) Edmond & Rubin (2004) Freedman & Enright (1996) McDonagh et al., (2005) Romano & De Luca (2005) Steil et al., (2011)
Blame	Blame Scale (Hoagwood, 1990)	Romano & De Luca (2005)
	Conflict tactics scale (CTS; Straus, 1996)	Batten
Interpersonal difficulties	Parent Child conflict tactics scale(PCCTS; Straus & Hamby, 1995)	Batten
	The Dyadic Adjustment Scale (DAS; Spanier, 1976)	McIntosh (2008)
	The Structural Analysis of Social behaviour Intrex (Introject) Questionnaire (SASB, Benjamin, 1988)	Paivio & Nieuwenhuis (2001)
	Social Adjustment Scale-Self-report (SAS-SR; Weissman& Bothell, 1976)	Talbot et al (2005) Talbot et al., (2011)

Social	Social activities and distress scale (SAD; Watson & Friend, 1969)	Smith et al., (1995)
	Cook-Medley Hostility Scale (Cook & Medley, 1954)	McDonagh et al., (2005)
Hostility	Rosenberg Self-esteem Scale (Rosenberg, 1965),	Clarke & Llewelyn
Self-esteem	Coopersmith Self-Esteem Inventory (CSEI; Coopersmith, 1981)	Freedman & Enright (1996)
	Self-Concept Questionnaire (SCQ; Robson, 1989)	Ryan et al., (2005)
	Jehu Belief Inventory (Jehu, 1988)	Clarke & Llewelyn Edmond et al (1999) Edmond & Rubin (2004) Ryan et al., (2005)
Cognitions/Beliefs	Traumatic Stress Institute Belief Scale (TSI; Pearlman, 2001)	McDonagh et al., (2005)
	Personal Beliefs and Reactions Scale (PBRS; Resick et al., 1991)	Owens, Pike & Chard (2001)
	World Assumptions Scale (WAS; Janoff-Bulman, 1989)	Owens, Pike & Chard (2001)
	Social Cognition and Object Relations Scale (SCOS; Weten, 1995)	Price (2004)
	Mindfulness Attention Awareness Scale (MAAS; Brown & Ryan, 2003)	Kimbrough et al., 2010
Mindfulness	The Quality of Life Inventory (QOLI; Frisch, Cornell, Villanueva, & Retzlaff, 1992)	McDonagh et al., (2005)
Quality of life	Pennebaker Inventory of Limbic Languidness (PILL; Pennbaker, 1982)	Batten
Study specific measures	Subjective Process Measures: SUDS (Wolpe, 1990)&VOC Scale (Shapiro, 1989)	Edmond et al (1999)
	Self-Report Forgiveness Measure (Freedman & Enright, 1996) Psychological Profile of forgiveness scale Hope Scale (Al-Mabuk et al., 1995)	Freedman & Enright, 1996
	Patient's Estimate of Improvement (PEI; Hatcher & Barends, 1996)	Price (2004)
	Bowerman Touch Empathy Scale (Bowerman, 1989) Medical Symptoms Checklist (Kroenke& Spitzer, 1998) Scale of Body Connection (SBC; Price, 2004) Scale of Body Investment (BIS; Orbach&Mikulincer, 1998)	Price (2005)
	Physical Symptoms Checklist Initial questionnaire (demographic info) Final questionnaire (info on experience of therapy)	Price (2006)
	Four daily ratings of intensity, vividness and uncontrollability of the feeling of being contaminated and distress. Assessments similar to those used by Hackman, Ehlers, Speckens& Clark (2004) on intrusive memories	Steil, Jung & Stangier (2011)

Appendix 5: List of primary authors contacted by email

Sonia Batten

Kathleen Chard*

Marylene Cloitre (mail undeliverable)

Enrique Echeburua

Tonya Edmund*

Suzanne Freedman

Elizabeth Kimbrough

Heather MacIntosh

Annmarie McDonagh

Sandra Paivio*

Cynthia Price*

Jennifer Price

Patricia Resick

Elisa Romano*

Maureen Ryan

Regina Steil

Nancy Talbot*

*Authors who responded to email

Appendix 6: Research Ethics Approval

NHS Fife | NHS Forth Valley | NHS Tayside

East of Scotland Research Ethics Service

Fife & Forth Valley Research Ethics Committee
Research Ethics Office
TAHSC, Residency Block C
Ninewells Hospital & Medical School
DUNDEE
DD1 9SY

Miss Eimear McKay
Trainee Clinical Psychologist
NHS Fife
Department of Clinical Psychology
Stratheden Hospital
Cupar
KY15 5RR

Date: 11 April 2011
Your Ref:
Our Ref: **FB/11/S0501/74**
Enquiries to: Miss Fiona Bain
Extension: Ninewells extension 32701
Direct Line: 01382 632701
Email: fionabain@nhs.net

Dear Miss McKay

Full title of study: **An exploration of emotion, meta-emotion and emotion regulation in adult survivors of childhood sexual abuse.**

REC reference number: **11/AL/0074**

Thank you for your letter of 25 March 2011. I can confirm the REC has received the documents listed below as evidence of compliance with the approval conditions detailed in our letter dated 10 March 2011. Please note these documents are for information only and have not been reviewed by the committee.

Documents received

The documents received were as follows:

Document	Version	Date
REC application	74541/201017/1/370	17 March 2011
Covering Letter		25 March 2011
Letter of invitation to participant	Psychologist - v2	17 March 2011
Letter of invitation to participant	Support Works - v2	17 March 2011
Participant Information Sheet: Support Worker	3	17 March 2011
Participant Information Sheet: Psychologist	3	17 March 2011
Participant Consent Form: Psychologist	3	17 March 2011
Participant Consent Form: Support worker	3	17 March 2011

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

POSITIVE ABOUT DISABLED PEOPLE

11/AL/0074	Please quote this number on all correspondence

Yours sincerely

Miss Fiona Bain
Committee Co-ordinator

E-mail: fionabain@nhs.net

Copy to: Karen Maitland, NHS Lothian
NHS Fife R&D office

EoSRES

NHS SCOTLAND

East of Scotland Research Ethics Service (EoSRES) REC 2
(formerly Fife & Forth Valley REC)
Tayside Medical Sciences Centre (TASC)
Residency Block C, Level 3
Ninewells Hospital & Medical School
George Pirie Way
Dundee DD19SY

Miss Eimear McKay
Trainee Clinical Psychologist
NHS Fife
Department of Clinical Psychology
Stratheden Hospital
CUPAR
KY15 5RR

Date: 20 December 2011
Your Ref:
Our Ref: FB/11/AL/0074
Enquiries to: Miss Fiona Bain
Extension: Ninewells extension: 32701
Direct Line: 01382 632701
Email: fionabain@nhs.net

Dear Miss McKay

Study title: **An exploration of emotion, meta-emotion and emotion regulation in adult survivors of childhood sexual abuse.**
REC reference: **11/AL/0074**
Amendment number: **AM01 (for REC reference only)**
Amendment date: **30 November 2011**

The above amendment was reviewed at the meeting of the Sub-Committee held on 20 December 2011.

Ethical opinion

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
GP/Consultant Information Sheets	Letter to Medical professional - 2	15 November 2011
Participant Consent Form: Group 2 (Health professional)	4	15 November 2011
Participant Consent Form: Group 1 (Health professional)	4	15 November 2011
Participant Information Sheet: Group 2 (Health professional)	1	15 November 2011
Participant Information Sheet: Group 1 (Health professional)	4	15 November 2011
Protocol	2	15 November 2011
Notice of Substantial Amendment (non-CTIMPs)	AM01 (for REC reference only)	30 November 2011
Covering Letter	Email	30 November 2011
Letter of invitation to participant	(Healthcare professional) 3	15 November 2011

Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

R&D approval

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D approval of the research.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

11/AL/0074:	***Please quote this number on all correspondence***

Yours sincerely

Ms Cathy Cooke
Vice-Chair

E-mail: fionabain@nhs.net

Enclosures: List of names and professions of members who took part in the review

Copy to: Karen Maitland, NHS Lothian
Dr Amanda Wood, NHS Fife

Appendix 7: Research and Development Management Approval

NHS Fife

Miss Eimear McKay
Dept of Clinical Psychology
Stratheden Hospital
CUPAR

Medical Director, Primary Care
Room 313
Hayfield House
Hayfield Road
KIRKCALDY
Fife KY2 5AH
Tel 01592 643355
www.show.scot.nhs.uk/fpct

Date 28 April 2011
Our Ref 11-013 11/AL/0074
Enquiries to Aileen Yell
Tel No 01383 565110
Email aileenyell@nhs.net

Dear Miss McKay

Project Title: An exploration of emotion, meta-emotion and emotion regulation in adult survivors of childhood sexual abuse

Thank you for your application to carry out the above project. Your project documentation (detailed below) has been reviewed for resource and financial implications for NHS Fife and I am happy to inform you that NHS permission for the above research has been granted on the basis described in the application form, protocol and supporting documentation. The documents reviewed were:

Document	Version	Date
Thesis Protocol	1	February 2011
Investigator CV		
IRAS R&D Form	3.1	10 February 2011
IRAS SSI Form	3.1	3 March 2011
Various documents referred to within REC correspondence		
REC letter confirming conditional favourable opinion		10 March 2011
Response to REC letter dated 10.03.11		25 March 2011
REC letter confirming evidence of compliance with approval conditions		11 April 2011

The terms of the approval state that the you are the investigator authorised to undertake this study within NHS Fife.

The co-sponsors for this study are The University of Edinburgh and NHS Lothian.

Details of our participation in studies will be included in annual returns we are expected to complete as part of our agreement with the Chief Scientist Office. Regular reports of the study require to be submitted. Your first report should be submitted to Dr A Wood, R&D Manager, R&D Resource Centre, Lynebank Hospital, Halbeath Rd, Dunfermline, KY11 4UW (Amanda.wood3@nhs.net) in 12 months time and subsequently at yearly intervals until the work is completed. A Lay Summary will also be required upon completion of the project.

In addition, approval is granted subject to the following conditions:-

- All research activity must comply with the standards detailed in the Research Governance Framework for Health & Community Care (http://www.cso.scot.nhs.uk/publications/resgov/resgov.htm), health & safety regulations, data protection principles, other appropriate statutory legislation and in accordance with Good Clinical Practice (GCP).

- Any amendments which may subsequently be made to the study should also be notified to Aileen Yell, Research Governance Officer (aileenyell@nhs.net) , as well as the appropriate regulatory authorities. Notification should also be given of any new research team members post approval and/or any changes to the status of the project.

- This organisation is required to monitor research to ensure compliance with the Research Governance Framework and other legal and regulatory requirements. This is achieved by random audit of research. You will be required to assist with and provide information in regard to monitoring and study outcomes (including providing recruitment figures to the R&D office as and when required).

- As custodian of the information collated during this research project you are responsible for ensuring the security of all personal information collected in line with NHS Scotland IT Security Policies, until the destruction of this data.

- Permission is only granted for the activities for which a favourable opinion has been given by the REC (and which have been authorised by the MHRA where appropriate).

- The research sponsor or the Chief Investigator or local Principal Investigator at a research site may take appropriate urgent safety measures in order to protect research participants against any immediate hazard to their health or safety. The R&D office (aileenyell@nhs.net) should be notified that such measures have been taken. The notification should also include the reasons why the measures were taken and the plan for further action. The R&D office should be notified within the same time frame of notifying the REC and any other regulatory bodies.

I would like to wish you every success with your study and look forward to receiving a summary of the findings for dissemination once the project is complete.

Yours sincerely

DR STELLA CLARK
Medical Director, Primary Care
NHS Fife

Cc : Aileen Yell, Research Governance Officer, NHS Fife, Lynebank Hospital, Dunfermline

NHS Fife

Miss Eimear McKay
Dept of Clinical Psychology
Stratheden Hospital
CUPAR

Medical Director, Primary Care
Room 313
Hayfield House
Hayfield Road
KIRKCALDY
Fife KY2 5AH
Tel 01592 643355
www.show.scot.nhs.uk/fpct

Date 28 April 2011
Our Ref 11-013 11/AL/0074
Enquiries to Aileen Yell
Tel No 01383 565110
Email aileenyell@nhs.net

Dear Miss McKay

Project Title: An exploration of emotion, meta-emotion and emotion regulation in adult survivors of childhood sexual abuse

Thank you for your application to carry out the above project. Your project documentation (detailed below) has been reviewed for resource and financial implications for NHS Fife and I am happy to inform you that NHS permission for the above research has been granted on the basis described in the application form, protocol and supporting documentation. The documents reviewed were:

Document	Version	Date
Thesis Protocol	1	February 2011
Investigator CV		
IRAS R&D Form	3.1	10 February 2011
IRAS SSI Form	3.1	3 March 2011
Various documents referred to within REC correspondence		
REC letter confirming conditional favourable opinion		10 March 2011
Response to REC letter dated 10.03.11		25 March 2011
REC letter confirming evidence of compliance with approval conditions		11 April 2011

The terms of the approval state that the you are the investigator authorised to undertake this study within NHS Fife.

The co-sponsors for this study are The University of Edinburgh and NHS Lothian.

Details of our participation in studies will be included in annual returns we are expected to complete as part of our agreement with the Chief Scientist Office. Regular reports of the study require to be submitted. Your first report should be submitted to Dr A Wood, R&D Manager, R&D Resource Centre, Lynebank Hospital, Halbeath Rd, Dunfermline, KY11 4UW (Amanda.wood3@nhs.net) in 12 months time and subsequently at yearly intervals until the work is completed. A Lay Summary will also be required upon completion of the project.

In addition, approval is granted subject to the following conditions:-

- All research activity must comply with the standards detailed in the Research Governance Framework for Health & Community Care (http://www.cso.scot.nhs.uk/publications/resgov/resgov.htm), health & safety regulations, data protection principles, other appropriate statutory legislation and in accordance with Good Clinical Practice (GCP).

- Any amendments which may subsequently be made to the study should also be notified to Aileen Yell, Research Governance Officer (aileenyell@nhs.net) , as well as the appropriate regulatory authorities. Notification should also be given of any new research team members post approval and/or any changes to the status of the project.

- This organisation is required to monitor research to ensure compliance with the Research Governance Framework and other legal and regulatory requirements. This is achieved by random audit of research. You will be required to assist with and provide information in regard to monitoring and study outcomes (including providing recruitment figures to the R&D office as and when required).

- As custodian of the information collated during this research project you are responsible for ensuring the security of all personal information collected in line with NHS Scotland IT Security Policies, until the destruction of this data.

- Permission is only granted for the activities for which a favourable opinion has been given by the REC (and which have been authorised by the MHRA where appropriate).

- The research sponsor or the Chief Investigator or local Principal Investigator at a research site may take appropriate urgent safety measures in order to protect research participants against any immediate hazard to their health or safety. The R&D office (aileenyell@nhs.net) should be notified that such measures have been taken. The notification should also include the reasons why the measures were taken and the plan for further action. The R&D office should be notified within the same time frame of notifying the REC and any other regulatory bodies.

I would like to wish you every success with your study and look forward to receiving a summary of the findings for dissemination once the project is complete.

Yours sincerely

DR STELLA CLARK
Medical Director, Primary Care
NHS Fife

Cc : Aileen Yell, Research Governance Officer, NHS Fife, Lynebank Hospital, Dunfermline

Appendix 8: Correspondence from Research and Ethics Committee

NHS Fife NHS Forth Valley NHS Tayside

East of Scotland Research Ethics Service

Fife & Forth Valley Research Ethics Committee
Research Ethics Office
Tayside Academic Health Sciences Centre
Ninewells Hospital & Medical School
Residency Block, Level 3
George Pirie Way
Dundee
DD1 9SY

Miss Eimear McKay
Department of Clinical Psychology
Stratheden Hospital
Cupar
KY15 5RR

Date:	10 March 2011
Your Ref:	
Our Ref:	LR/11/AL/0074
Enquiries to:	Mrs Lorraine Reilly
Extension:	Ninewells extension 40099
Direct Line:	01382 740099
Email:	Lorraine.reilly@nhs.net

Dear Miss McKay

Full title of study: **An exploration of emotion, meta-emotion and emotion regulation in adult survivors of childhood sexual abuse.**

REC reference number: **11/AL/0074**

The Research Ethics Committee reviewed the above application at the meeting held on 01 March 2011. Thank you for attending to discuss the study.

Ethical opinion

The members of the Committee present gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below.

The following points require to be addressed by letter and submission of revised documentation where requested. **Please note that there is no requirement to amend your application form.**

1. Regarding the application form:

- Regarding A50 – please clarify why you are not registering the research on a public database.
- Please confirm the start date as the Committee meeting reviewing your application was on 01/03/2011 but you indicated at A69-1 that the study would commence on 01/03/2011.
- Please amend A76 as you have ticked both University and NHS insurance.

2. Regarding the Participant Information Sheet (PIS):

- Under 'What will happen to the Information Collected in the Study? – please insert a sentence stating that that identifiable data collected would be retained and used in the study.

No further data would be collected or any other research procedures carried out as per A35 of the application form.

- ✓ Under 'Further Information' – please include an independent contact, this should be someone who is familiar with the study but is not involved with the study.
- ✓ Please include a sentence informing participants that their GP will be informed they are taking part in the study.

Please submit revised Participant Information Sheets, which should include a new version number and new full date.

3. ✓Regarding the Consent Form:
   - You have indicated in A35 that identifiable data collected would be retained and used in the study. No further data would be collected or any other research procedures carried out. Please insert a statement regarding this in the Consent Form.

Please submit revised Consent Forms, which should include a version number and full date as a footer and the new date and version number of Participant Information Sheet in Statement 1.

3. ✓The Invitation letter should state who the researcher is.

The following points were clarified on the application form:

- You clarified that participants will all be approached by the psychologists or support workers at their routine clinic appointment and given the Letter of Invitation and Participant Information Sheet regarding the study. If they are interested or require more information their details are passed to yourself who will wait at least 24 hours to contact participant to clarify if they wish to take part in the study.
- You clarified that you would ask the questions in order to gauge the response of the participants. You also clarified that there were implements in place if participants wished to discuss emotional issues.
- Regarding the timescale for completing the questionnaires – you clarified that you trialled the time with friends and family and felt there was adequate time for participants to respond. You also clarified that participants can complete the questionnaires over a number of sessions and not in one sitting.

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

For NHS research sites only, management permission for research ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research governance arrangements. Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where the only involvement of the NHS organisation is as a Participant Identification Centre (PIC), management permission for research is not required but the R&D office should be notified of the study and agree to the organisation's involvement. Guidance on procedures for PICs is available in IRAS. Further advice should be sought from the R&D office where necessary.

Sponsors are not required to notify the Committee of approvals from host organisations.

It is responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Protocol	1	01 February 2011
Participant Information Sheet: Support Worker	2	10 February 2011
Letter of invitation to participant – Support Worker	1	10 February 2011
Letter of invitation to participant - Psychologist	1	10 February 2011
GP/Consultant Information Sheets	1	10 February 2011
Investigator CV		
Questionnaire: Regulation of Emotion Questionnaire 2		
Questionnaire: Relationship Questionnaire		
Questionnaire: CORE		
Questionnaire: PCL-C		
Questionnaire: AAQ-II		
Questionnaire: Dissociative Experiences Scale II		
Questionnaire: Computer Task		
Questionnaire: Your Emotional Experience		
CV- Professor Michael Power		
Participant Information Sheet: Psychologist	2	10 February 2011
Questionnaire: The Basic Emotions Scale		
Questionnaire: CFQ15		
Evidence of insurance or indemnity		13 September 2010
REC application		11 February 2011
Participant Consent Form: Psychologist	2	10 February 2011
Participant Consent Form: Support Worker	2	10 February 2011
Covering Letter		10 February 2011

Appendix 9: Outcome of Methodological Review-University of Edinburgh

Methodological Review

Main Academic Thesis Supervisor's Appraisal of Project Risk

Supervisor's Name: Mick Power

Do you consider that the project should proceed in broadly its current form?

(Delete as appropriate)

Yes X Yes, subject to revisions outlined below No

Please outline the reasons for your response. In particular, highlight any areas of risk to the completion of the project that have not been fully addressed within the proposal and any steps that could be taken to reduce risks:

An excellent proposal that has been well thought through.

Date: 20/5/11

Methodological Review

Clinical Thesis Supervisor's Appraisal of Project Risk

Supervisor's Name: Susan McAlpine

Position: Clinical Psychologist

Do you consider that the project should proceed in broadly its current form?

(Delete as appropriate)

Yes

Please outline the reasons for your response. In particular, highlight any areas of risk to the completion of the project that have not been fully addressed within the proposal and any steps that could be taken to reduce risks:

A very detailed thesis project.

Date: 06.06.11

Methodological Review

Clinical Thesis Supervisor's Appraisal of Project Risk

Supervisor's Name: Thanos Karatzias

Position: Reader, Edinburgh Napier University

Do you consider that the project should proceed in broadly its current form?

(Delete as appropriate)

Yes X Yes, subject to revisions outlined below No

Please outline the reasons for your response. In particular, highlight any areas of risk to the completion of the project that have not been fully addressed within the proposal and any steps that could be taken to reduce risks:

This is an excellent proposal. Eimear has considered strengths and limitations of her work as well as any potential risks.

Date: 22/05/2011

Appendix 10: Letter of management approval from KASP

Kingdom Abuse Survivors Project

Supporting Survivors of Childhood Sexual Abuse in Fife

182A The Esplanade
Kirkcaldy
Fife
KY1 1RE

30 December 2011

To whom it may concern

Authorisation of Thesis participants for "An exploration of emotion, meta-emotion and emotion regulation in adult survivors of childhood sexual abuse."

This letter confirms that Eimear McKay had permission from Kingdom Abuse Survivors Project to recruit participants from amongst our membership client base of adult survivors of childhood sexual abuse for her thesis - "An exploration of emotion, meta-emotion and emotion regulation in adult survivors of childhood sexual abuse."

Yours sincerely

Marnie Collin

Manager

Telephone Kirkcaldy / Facsimile: 01592 644217
Email: info@kasp.org.uk website: www.kasp.org.uk e-helpline: volunteer@kasp.org.uk
KASP is supported by the Fife NHS Board and Fife Council Recognised as a Charity in Scotland No:

Appendix 11: Letter of management approval Open Secret

OPEN SECRET

Services for individuals and families affected by childhood sexual abuse

05 December 2011

To whom it may concern

Dear Sir/ madam

"An exploration of emotion, meta-emotion and emotion regulation in adult survivors o abuse."

We would confirm that Open Secret give permission for Eimear McKay to work with Open Secret clients on the above project.

If you require any further information do not hesitate to contact me.

Yours faithfully

Janine Rennie

Chief Executive

Scottish Charity No:

SC 024065

www.opensecret.org

98 Thornhill Road

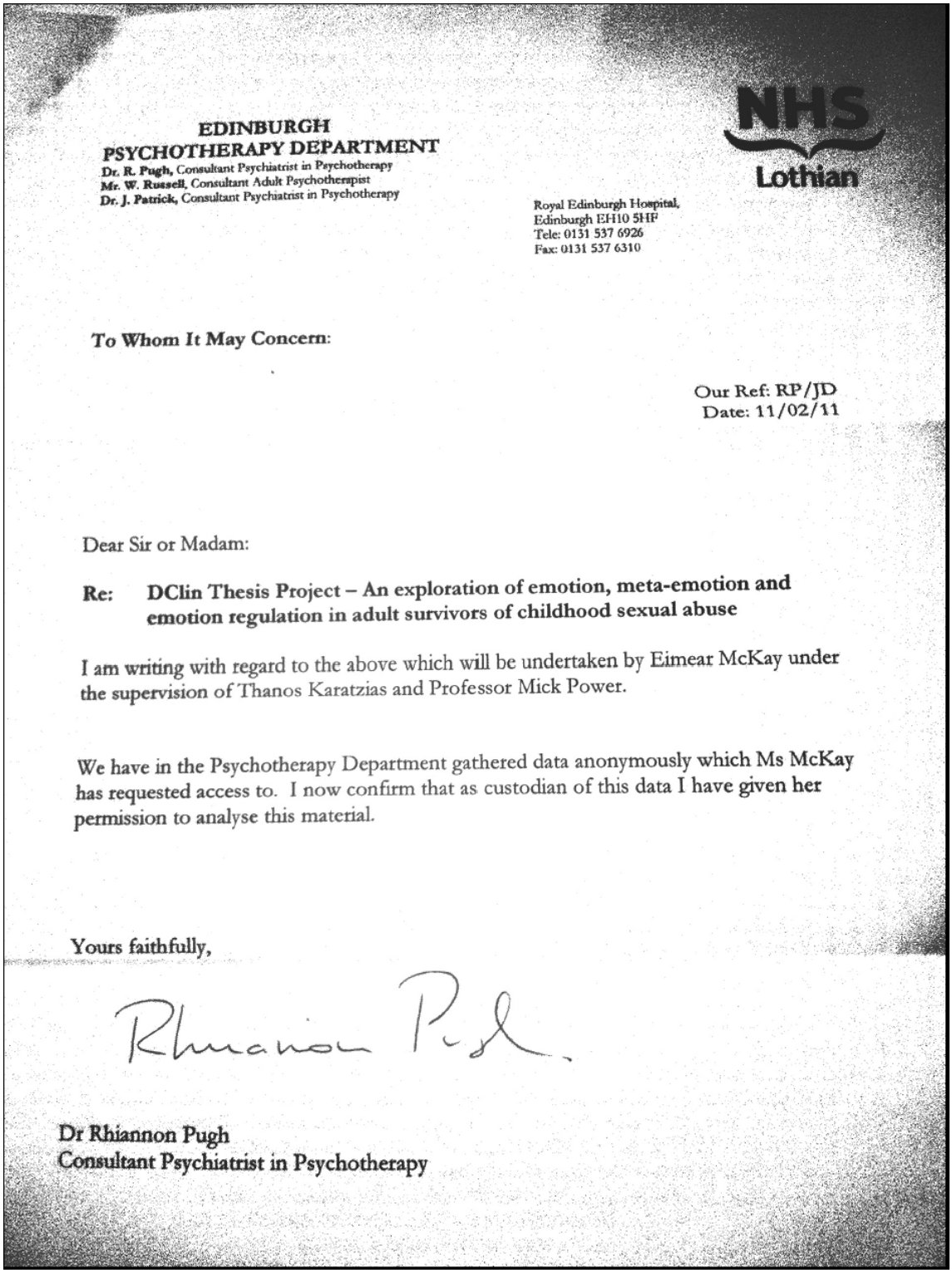
Falkirk FK2 7AB

Tel: 01324 630100

Fax: 01324 635650

Email: info@opensecret.org

Appendix 12: Permission to use data from NHS Lothian Psychotherapy dept



EDINBURGH
PSYCHOTHERAPY DEPARTMENT
Dr. R. Pugh, Consultant Psychiatrist in Psychotherapy
Mr. W. Russell, Consultant Adult Psychotherapist
Dr. J. Patrick, Consultant Psychiatrist in Psychotherapy

Royal Edinburgh Hospital,
Edinburgh EH10 5HF
Tele: 0131 537 6926
Fax: 0131 537 6310

NHS Lothian

To Whom It May Concern:

Our Ref: RP/JD
Date: 11/02/11

Dear Sir or Madam:

Re: DClin Thesis Project – An exploration of emotion, meta-emotion and emotion regulation in adult survivors of childhood sexual abuse

I am writing with regard to the above which will be undertaken by Eimear McKay under the supervision of Thanos Karatzias and Professor Mick Power.

We have in the Psychotherapy Department gathered data anonymously which Ms McKay has requested access to. I now confirm that as custodian of this data I have given her permission to analyse this material.

Yours faithfully,

Rhiannon Pugh

Dr Rhiannon Pugh
Consultant Psychiatrist in Psychotherapy

Appendix 13: Covering letter attached to questionnaires-Journal Article 1

EDINBURGH
PSYCHOTHERAPY DEPARTMENT
Dr. R. Pugh, Consultant Psychiatrist in Psychotherapy
Mr. W. Russell, Consultant Adult Psychotherapist

Royal Edinburgh Hospital
Edinburgh EH10 5BT
Tele: 0131 537 6926
Fax: 0131 537 6310

NHS
Lothian

Our Ref: JD/RP
Date: 24/06/08

Clinical Audit - Invitation

Dear Patient,

You are being invited by the Psychotherapy Service to take part in a clinical audit. The overall aim of this audit is to gather information about the emotional distress that patients who are referred to our Service currently experience. By collecting such information we hope to be able to improve the services we provide to our patients.

As part of this audit you are asked to complete a few questionnaires only once. Your participation in this exercise will be voluntary and your name will not be used in the analysis of these data. You are free to refuse to take part. **If you choose to participate in the audit, please complete the attached questionnaires and return with your opt in slip in the envelop provided.**

Your decision whether or not to participate in this audit will have no influence on any current or future psychotherapeutic or medical care you receive. It is also separate from your relationship with any psychotherapy staff you are involved with in this service.

Thank you for taking the time to read this information

Rhiannon Pugh
Head of Psychotherapy Service

Appendix 14: Measures

THE BASIC EMOTIONS SCALE

The purpose of this scale is to find out about how much or how often you experience certain emotions and then to ask some questions about how you feel actually during particular emotions themselves.

The first part of the scale is designed to explore how you have felt DURING THE LAST WEEK.

For each emotion, please circle ONE number only between 1 and 7, to indicate how you have felt.

OVER THE PAST WEEK I HAVE FELT :

	not at all			some of the time			all of the time
ANGER	1	2	3	4	5	6	7
DESPAIR	1	2	3	4	5	6	7
SHAME	1	2	3	4	5	6	7
ANXIETY	1	2	3	4	5	6	7
HAPPINESS	1	2	3	4	5	6	7
FRUSTRATION	1	2	3	4	5	6	7
MISERY	1	2	3	4	5	6	7
GUILT	1	2	3	4	5	6	7
NERVOUSNESS	1	2	3	4	5	6	7
JOY	1	2	3	4	5	6	7
IRRITATION	1	2	3	4	5	6	7
GLOOMINESS	1	2	3	4	5	6	7
HUMILIATED	1	2	3	4	5	6	7
TENSE	1	2	3	4	5	6	7
LOVING	1	2	3	4	5	6	7
AGGRESSION	1	2	3	4	5	6	7
MOURNFUL	1	2	3	4	5	6	7
BLAMEWORTHY	1	2	3	4	5	6	7
WORRIED	1	2	3	4	5	6	7
CHEERFUL	1	2	3	4	5	6	7
DISGUST (i.e. repulsion)	1	2	3	4	5	6	7

In the second part of this questionnaire we would like to know about how you feel IN GENERAL.

The question asks about HOW OFTEN you feel the emotion.

Again, for each question please circle ONE number only between 1 and 7 to indicate how you feel.

IN GENERAL , I FEEL THIS EMOTION :

ANGER	1	2	3	4	5	6	7
DESPAIR	1	2	3	4	5	6	7
SHAME	1	2	3	4	5	6	7
ANXIETY	1	2	3	4	5	6	7
HAPPINESS	1	2	3	4	5	6	7
FRUSTRATION	1	2	3	4	5	6	7
MISERY	1	2	3	4	5	6	7
GUILT	1	2	3	4	5	6	7
NERVOUSNESS	1	2	3	4	5	6	7
JOY	1	2	3	4	5	6	7
IRRITATION	1	2	3	4	5	6	7
GLOOMINESS	1	2	3	4	5	6	7
HUMILIATED	1	2	3	4	5	6	7
TENSE	1	2	3	4	5	6	7
LOVING	1	2	3	4	5	6	7
AGGRESSION	1	2	3	4	5	6	7
MOURNFUL	1	2	3	4	5	6	7
BLAMEWORTHY	1	2	3	4	5	6	7
WORRIED	1	2	3	4	5	6	7
CHEERFUL	1	2	3	4	5	6	7
DISGUST (i.e. repulsion)	1	2	3	4	5	6	7

In the third part of this questionnaire we would like to ask you for some information about HOW WELL YOU FEEL YOU COPE when you experience that emotion. For example, you might feel completely out of control of the emotion, or overwhelmed by the emotion in some other way.

Please note: even if you never experience a particular emotion, please answer the question by imagining how you think you would feel if you did experience that emotion.

Again, for each part of the question, please circle ONE number between 1 and 7 to indicate how well you feel you cope with the emotion

	Cope very well						.
ANGER	1	2	3	4	5	6	7
DESPAIR	1	2	3	4	5	6	7
SHAME	1	2	3	4	5	6	7
ANXIETY	1	2	3	4	5	6	7
HAPPINESS	1	2	3	4	5	6	7
FRUSTRATION	1	2	3	4	5	6	7
MISERY	1	2	3	4	5	6	7
GUILT	1	2	3	4	5	6	7
NERVOUSNESS	1	2	3	4	5	6	7
JOY	1	2	3	4	5	6	7
IRRITATION	1	2	3	4	5	6	7
GLOOMINESS	1	2	3	4	5	6	7
HUMILIATED	1	2	3	4	5	6	7
TENSE	1	2	3	4	5	6	7
LOVING	1	2	3	4	5	6	7
AGGRESSION	1	2	3	4	5	6	7
MOURNFUL	1	2	3	4	5	6	7
BLAMEWORTHY	1	2	3	4	5	6	7
WORRIED	1	2	3	4	5	6	7
CHEERFUL	1	2	3	4	5	6	7
DISGUST (i.e. repulsion)	1	2	3	4	5	6	7

Thank You Very Much For Your Help With This Questionnaire

Regulation of Emotion Questionnaire 2

We all experience lots of different feelings or emotions. For example, different things in our lives make us feel happy, sad, angry and so on…

The following questions ask you to think about **how often** you do certain things **in response to your emotions**. You do not have to think about specific emotions but just how often you **generally** do the things listed below.

Please tick the box corresponding to the answer that fits best. We all respond to our emotions in different ways so there are no right or wrong answers.

In GENERAL **how do you respond to your emotions**?

	Never	Seldom	Often	Very Often	Always
1. I talk to someone about how I feel	○	○	○	○	○
2. I take my feelings out on others verbally (e.g. shouting, arguing)	○	○	○	○	○
3. I seek physical contact from friends or family (e.g. a hug, hold hands)	○	○	○	○	○
4. I review (rethink) my thoughts or beliefs	○	○	○	○	○
5. I harm or punish myself in some way	○	○	○	○	○
6. I do something energetic (e.g. play sport, go for a walk)	○	○	○	○	○
7. I dwell on my thoughts and feelings (e.g. It goes round and round in my head and I can't stop it)	○	○	○	○	○

In GENERAL **how do you respond to your emotions?**	Never	Seldom	Often	Very Often	Alw ays
8. I ask others for advice	○	○	○	○	○
9. I review (rethink) my goals or plans	○	○	○	○	○
10. I take my feelings out on others physically (e.g. fighting, lashing out)	○	○	○	○	○
11. I put the situation into perspective	○	○	○	○	○
12. I concentrate on a pleasant activity	○	○	○	○	○
13. I try to make others feel bad (e.g. being rude, ignoring them)	○	○	○	○	○
14. I think about people better off and make myself feel worse	○	○	○	○	○
15. I keep the feeling locked up inside	○	○	○	○	○
16. I plan what I could do better next time	○	○	○	○	○
17. I bully other people (e.g. saying nasty things to them, hitting them)	○	○	○	○	○
18. I take my feelings out on objects around me (e.g. deliberately causing damage to my house, school or outdoor things)	○	○	○	○	○
19. Things feel unreal (e.g. I feel strange, things around me feel strange, I daydream)	○	○	○	○	○
20. I telephone friends or family	○	○	○	○	○

21. I go out and do something nice (e.g. cinema, shopping, go for a meal, meet people)	○	○	○	○	○

Thank you for your help.

PCL-C

INSTRUCTIONS: Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully, then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

		Not at all	A little bit	Moderately	Quite a bit	Extremely
1.	Repeated, disturbing *memories, thoughts,* or *images* of a stressful experience from the past?	1	2	3	4	5
2.	Repeated, disturbing *dreams* of a stressful experience from the past?	1	2	3	4	5
3.	Suddenly *acting* or *feeling* as if a stressful experience *were happening again* (as if you were reliving it)?	1	2	3	4	5
4.	Feeling *very upset* when *something reminded you* of a stressful experience from the past?	1	2	3	4	5
5.	Having *physical reactions* (e.g., heart pounding, trouble breathing, sweating) when *something reminded you* of a stressful experience from the past?	1	2	3	4	5
6.	Avoiding *thinking about* or *talking about* a stressful experience from the past or avoiding *having feelings* related to it?	1	2	3	4	5
7.	Avoiding *activities* or *situations* because *they reminded you* of a stressful experience from the past?	1	2	3	4	5
8.	Trouble *remembering important parts* of a stressful experience from the past?	1	2	3	4	5
9.	*Loss of interest* in activities that you used to enjoy?	1	2	3	4	5
10.	Feeling *distant* or *cut off* from other people?	1	2	3	4	5
11.	Feeling *emotionally numb* or being unable to have loving feelings for those close to you?	1	2	3	4	5
12.	Feeling as if your *future* will somehow be *cut short*?	1	2	3	4	5
13.	Trouble *falling* or *staying asleep*?	1	2	3	4	5
14.	Feeling *irritable* or having *angry outbursts*?	1	2	3	4	5
15.	Having *difficulty concentrating*?	1	2	3	4	5
16.	Being "*super-alert*" or watchful or on guard?	1	2	3	4	5
17.	Feeling *jumpy* or easily startled?	1	2	3	4	5

PCL-C for DSM-IV (11/1/94) Weathers, Litz, Huska, & Keane National Center for PTSD - Behavioral Science Division

CLINICAL
OUTCOMES in
ROUTINE
EVALUATION

OUTCOME MEASURE

Site ID

letters only | numbers only

Client ID

Therapist ID | numbers only (1) | numbers only (2)

Sub codes

Date form given (D D / M M / Y Y Y Y)

Age

Male ☐ Female ☐

Stage Completed

S Screening
R Referral
A Assessment
F First Therapy Session
P Pre-therapy (unspecified)
D During Therapy
L Last therapy session
X Follow up 1
Y Follow up 2

Stage ☐

Episode ☐

IMPORTANT - PLEASE READ THIS FIRST

This form has 34 statements about how you have been OVER THE LAST WEEK.
Please read each statement and think how often you felt that way last week.
Then tick the box which is closest to this.
Please use a dark pen (not pencil) and tick clearly within the boxes.

	Over the last week	Not at all	Only Occasionally	Sometimes	Often	Most or all the time	OFFICE USE ONLY
1	I have felt terribly alone and isolated	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
2	I have felt tense, anxious or nervous	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
3	I have felt I have someone to turn to for support when needed	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
4	I have felt O.K. about myself	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ W
5	I have felt totally lacking in energy and enthusiasm	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
6	I have been physically violent to others	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R
7	I have felt able to cope when things go wrong	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
8	I have been troubled by aches, pains or other physical problems	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
9	I have thought of hurting myself	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R
10	Talking to people has felt too much for me	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
11	Tension and anxiety have prevented me doing important things	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
12	I have been happy with the things I have done.	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
13	I have been disturbed by unwanted thoughts and feelings	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
14	I have felt like crying	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ W

Please turn over

Over the last week	Not at all	Only Occasionally	Sometimes	Often	Most or all the time	OFFICE USE ONLY
15 I have felt panic or terror	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
16 I made plans to end my life	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R
17 I have felt overwhelmed by my problems	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ W
18 I have had difficulty getting to sleep or staying asleep	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
19 I have felt warmth or affection for someone	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
20 My problems have been impossible to put to one side	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
21 I have been able to do most things I needed to	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
22 I have threatened or intimidated another person	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R
23 I have felt despairing or hopeless	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
24 I have thought it would be better if I were dead	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R
25 I have felt criticised by other people	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
26 I have thought I have no friends	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
27 I have felt unhappy	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
28 Unwanted images or memories have been distressing me	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
29 I have been irritable when with other people	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
30 I have thought I am to blame for my problems and difficulties	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
31 I have felt optimistic about my future	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ W
32 I have achieved the things I wanted to	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
33 I have felt humiliated or shamed by other people	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
34 I have hurt myself physically or taken dangerous risks with my health	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R

THANK YOU FOR YOUR TIME IN COMPLETING THIS QUESTIONNAIRE

	(W)	(P)	(F)	(R)	All items	All minus R
Total Scores	☐	☐	☐	☐	☐	☐
Mean Scores (Total score for each dimension divided by number of items completed in that dimension)	☐	☐	☐	☐	☐	☐

Dissociative Experiences Scale II
(DES II)

Name: _____

Date: _____ Age: _____ Sex: M F

This questionnaire consists of 28 questions about experiences that you may have in your daily life. We are interested in how often you have these experiences. It is important, however, that your answers show how often these experiences happen to you when you **are not** under the influence of alcohol or drugs. To answer the questions, please determine to what degree the experience described in the question applies to you and circle the number to show what percentage of the time you have the experience.

Example:

0% (never) 10 20 30 40 50 60 70 80 90 100% (always)

---

1. Some people have the experience of driving or riding in a car or bus or subway and suddenly realizing that they don't remember what has happened during all or part of the trip. Circle a number to show what percentage of the time this happens to you.

   0% 10 20 30 40 50 60 70 80 90 100%

2. Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was said. Circle a number to show what percentage of the time this happens to you.

   0% 10 20 30 40 50 60 70 80 90 100%

3. Some people have the experience of finding themselves in a place and having no idea how they got there. Circle a number to show what percentage of the time this happens to you.

   0% 10 20 30 40 50 60 70 80 90 100%

4. Some people have the experience of finding themselves dressed in clothes that they don't remember putting on. Circle a number to show what percentage of the time this happens to you.

   0% 10 20 30 40 50 60 70 80 90 100%

5. Some people have the experience of finding new things among their belongings that they do not remember buying. Circle a number to show what percentage of the time this happens to you.

   0% 10 20 30 40 50 60 70 80 90 100%

6. Some people sometimes find that they are approached by people who they do not know who call them by another name or insist that they have met them before. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

7. Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

8. Some people are told that they sometimes do not recognize friends or family members. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

9. Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

10. Some people have the experience of being accused of lying when they do not think that they have lied. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

11. Some people have the experience of looking in a mirror and not recognizing themselves. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

12. Some people have the experience of feeling that other people, objects, and the world around them are not real. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

13. Some people have the experience of feeling that their body does not seem to belong to them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

14. Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

15. Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

16. Some people have the experience of being in a familiar place but finding it strange and unfamiliar. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

17. Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

18. Some people find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

19. Some people find that they sometimes are able to ignore pain. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

20. Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

21. Some people sometimes find that when they are alone they talk out loud to themselves. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

22. Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

23. Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations, etc.). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

24. Some people sometimes find that they cannot remember whether they have done something or have just thought about doing that thing (for example, not knowing whether they have mailed a letter or have just thought about mailing it). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

25. Some people find evidence that they have done things that they do not remember doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

26. Some people sometimes find writings, drawings, or notes among their belongings that they must have done but cannot remember doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

27. Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

28. Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

AAQ-II

Below you will find a list of statements. Please rate how true each statement is for you by circling a number next to it. Use the scale below to make your choice.

1	2	3	4	5	6	7
never true	very seldom true	seldom true	sometimes true	frequently true	almost always true	always true

1.	Its OK if I remember something unpleasant.	1	2	3	4	5	6	7
2.	My painful experiences and memories make it difficult for me to live a life that I would value.	1	2	3	4	5	6	7
3.	I'm afraid of my feelings.	1	2	3	4	5	6	7
4.	I worry about not being able to control my worries and feelings.	1	2	3	4	5	6	7
5.	My painful memories prevent me from having a fulfilling life.	1	2	3	4	5	6	7
6.	I am in control of my life.	1	2	3	4	5	6	7
7.	Emotions cause problems in my life.	1	2	3	4	5	6	7
8.	It seems like most people are handling their lives better than I am.	1	2	3	4	5	6	7
9.	Worries get in the way of my success.	1	2	3	4	5	6	7
10.	My thoughts and feelings do not get in the way of how I want to live my life.	1	2	3	4	5	6	7

CFQ15

Below you will find a list of statements. Please rate how true each statement is for you by circling a number next to it. Use the scale below to make your choice.

1	2	3	4	5	6	7
never true	very seldom true	seldom true	sometimes true	frequently true	almost always true	always true

1. My thoughts cause me distress or emotional pain	1	2	3	4	5	6	7
2. I get so caught up in my thoughts that I am unable to do the things that I most want to do	1	2	3	4	5	6	7
3. Even when I am having distressing thoughts, I know that they may become less important eventually	1	2	3	4	5	6	7
4. I over-analyse situations to the point where it's unhelpful to me	1	2	3	4	5	6	7
5. I struggle with my thoughts	1	2	3	4	5	6	7
6. Even when I'm having upsetting thoughts, I can see that those thoughts may not be literally true	1	2	3	4	5	6	7
7. I get upset with myself for having certain thoughts	1	2	3	4	5	6	7
8. I need to control the thoughts that come into my head	1	2	3	4	5	6	7
9. I find it easy to view my thoughts from a different perspective	1	2	3	4	5	6	7
10. I tend to get very entangled in my thoughts	1	2	3	4	5	6	7
11. I tend to react very strongly to my thoughts	1	2	3	4	5	6	7
12. Its possible for me to have negative thoughts about myself and still know that I am an OK person	1	2	3	4	5	6	7
13. It's such a struggle to let go of upsetting thoughts even when I know that letting go would be helpful	1	2	3	4	5	6	7
14. I can do difficult things even if my thoughts say they are impossible to do	1	2	3	4	5	6	7
15. I can be aware of my thoughts without necessarily reacting to them	1	2	3	4	5	6	7

Thank you for completing this questionnaire

RELATIONSHIP QUESTIONNAIRE

PLEASE READ THE DIRECTIONS!

1. Following are descriptions of four general relationship styles that people often report.

Please read each description and **CIRCLE** the letter corresponding to the style that *best* describes you or is *closest* to the way you generally are in your close relationships.

A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

2. Please **rate** each of the following relationship styles according to the *extent* to which you think each description corresponds to your general relationship style.

A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

D. I am comfortable without close emotional relationships, It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

	Not at all like me			**Somewhat like me**			**Very much like me**
Style A.	1	2	3	4	5	6	7
Style B.	1	2	3	4	5	6	7
Style C.	1	2	3	4	5	6	7
Style D.	1	2	3	4	5	6	7

The Negative Emotion Coupling Questionnaire

Your Emotional Experience

The purpose of this questionnaire is to find out how often you experience certain emotions and how they are experienced. Please put a cross in the box that best fits your answer. Try to think of real situations where you have felt the emotion/s before you answer.

1. If you ever feel **SAD** do you ever feel either at the same time, or soon afterwards, any of the following?

	never	seldom	quite often	very often	always
1. Sadness (about feeling sad)	never	seldom	quite often	very often	always
2. Shame	never	seldom	quite often	very often	always
3. Anger	never	seldom	quite often	very often	always
4. Anxiety	never	seldom	quite often	very often	always
5. Guilt	never	seldom	quite often	very often	always

2. If you ever feel **ASHAMED** do you ever feel either at the same time, or soon afterwards, any of the following?

	never	seldom	quite often	very often	always
1. Sadness	never	seldom	quite often	very often	always
2. Shame (about	never	seldom	quite often	very often	always
3. Anger	never	seldom	quite often	very often	always
4. Anxiety	never	seldom	quite often	very often	always
5. Guilt	never	seldom	quite often	very often	always

3. If you ever feel **ANGRY** do you ever feel either at the same time, or soon afterwards, any of the following?

	never	seldom	quite often	very often	always
1. Sadness	never	seldom	quite often	very often	always
2. Shame	never	seldom	quite often	very often	always
3. Anger	never	seldom	quite often	very often	always
4. Anxiety	never	seldom	quite often	very often	always
5. Guilt	never	seldom	quite often	very often	always

4. If you ever feel **ANXIOUS** do you ever feel either at the same time, or soon afterwards, any of the following?

	never	seldom	quite often	very often	always
1. Sadness	never	seldom	quite often	very often	always
2. Shame	never	seldom	quite often	very often	always
3. Anger	never	seldom	quite often	very often	always
4. Anxiety	never	seldom	quite often	very often	always
5. Guilt	never	seldom	quite often	very often	always

5. If you ever feel **GUILTY** do you ever feel either at the same time, or soon afterwards,

any of the following?

	never	Seldom	quite often	very often	always
1. Sadness	never	Seldom	quite often	very often	always
2. Shame	never	Seldom	quite often	very often	always
3. Anger	never	Seldom	quite often	very often	always
4. Anxiety	never	Seldom	quite often	very often	always
5. Guilt	never	Seldom	quite often	very often	always

Appendix 15: Participant Information Sheet- CSA group

Emotion and childhood experience.

You are being invited to take part in a research project. Before you decide if you would like to take part please read this information very carefully. It tells you all about the study and what you will need to do, should you wish to take part. This study is being conducted as part of an academic qualification (Doctorate in Clinical Psychology).

What is the purpose of the study?

The study will explore emotions (e.g. sadness, happiness, guilt) experienced by adult survivors of adverse childhood experiences, compared to those who experienced difficulties only in adulthood. It will also look at whether the quality of the relationship that adults had with their primary caregiver (usually a parent or guardian) during childhood affects the way they think about their emotions and respond to them.

How we experience emotions is an important factor in coping with traumatic experiences. By examining emotions, relationship and experiences of survivors of adverse childhood experiences, we may be able to inform future therapeutic interventions.

The study is also part of an educational project.

Why have I been invited?

You have been identified by your healthcare professional as someone who has experienced adversity in childhood, you may therefore be able to provide information which helps us better understand the emotional experiences of adult survivors.

Do I have to take part?

No, it is up to you. Your healthcare professional will describe the study and go through this information sheet, which you can take away and discuss with others if you want to. If you decide to take part we will arrange for the researcher to contact you and discuss the research further. We will then ask you to sign a consent form. You are free to withdraw at any time, without giving a reason. If you decide not to take part this will not affect the standard of care you receive.

What will happen to me if I take part?

You will meet with the researcher for approximately 60-90 minutes to complete questionnaires and a short task on a computer. Even if you have never used a computer before you should be able to take part as the researcher will help you. The computer task involves a series of words (e.g. joy, shame) appearing on screen and you must choose another word on screen which you associate with this (e.g. happy, disgust, self, friend). The appointment usually takes up to 90 minutes but if you prefer we can complete the task in up to four shorter meetings.

What are the possible disadvantages or risks of taking part?

The questionnaires or computer task may bring up some sensitive topics but if you become distressed, you can take a break, miss out questions or withdraw from the study. If distressed, you will also be given the option of discussing your feelings further with your healthcare professional.

What happens if I don't want to carry on with the study?

You can leave the study at any time without giving a reason; this will have no effect on any other care or treatment you are receiving. Information already collected would be retained and used in the study. No further data would be collected and you would not be asked to complete any further measures.

What if you have questions or concerns?

If you have a concern about any aspect of this study, you should speak to the researcher who will do their best to answer your questions (Tel, 01334 696218 or write to Eimear McKay, Clinical Psychology Dept, Stratheden Hospital, Cupar KY15 5RR).

Will my taking part in this study be kept confidential?

All information, which is collected during the course of the study will kept strictly confidential and any information which could identify you will be replaced with a participant information number to anonymise it. This data will only be accessed by the primary researcher (Eimear McKay, Trainee Clinical Psychologist) and her supervisor, unless you indicate on the consent form that you would like your results to be shared with your healthcare professional. The data reported and presented to others will be anonymised so no-one could identify you or link you to your responses. The completed questionnaires will be kept securely for up to five years after which time it will be destroyed.

Any information discussed during sessions will be confidential, however if you disclose any information indicating risk of harm to yourself or others the researcher will have a duty of care to discuss this with your healthcare professional. You will also be informed of this, should that occur. With your permission, your GP will also be informed that you are participating in the study.

What will happen to the result of the study?

All identifiable data collected will be stored securely, anonymised and used for the study. The anonymised results of the study will be written up as part of an academic project and submitted as part of the University of Edinburgh Doctorate of Clinical Psychology training course requirements. It may also be published in an academic journal. You will not be identified in any report or publication.

Who is organising and funding the research?

This is a Doctorate of Clinical Psychology student project organised by the University of Edinburgh and NHS Fife.

Who has reviewed the Study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by the Fife & Forth Valley Research Ethics Committee.

If you have a complaint

If at any time you wish to make a complaint about any aspect of the study please contact NHS Fife Headquarters, Hayfield House, Hayfield Road, Kirkcaldy, Fife, KY2 5AH, and follow the standard NHS complaints procedure. Alternatively, you can contact Dr Andy Summers, ***Clinical Psychology Department. Lynebank Hospital,*** Fife. KY11 4UW or telephone 01383 565402/565403.

Further Information

If you have any questions or concerns regarding the study, please contact, Miss Tara Graham, Research and Development Psychologist by phone on (01334) 696218. Or write to: Miss Tara Graham, ***Clinical Psychology Department. Stratheden Hospital, Cupar.*** Fife. KY15 5RR.

Thank you

Appendix 16: Participant Information Sheet- NCT group

Emotion and childhood experience.

You are being invited to take part in a research project. Before you decide if you would like to take part please read this information very carefully. It tells you all about the study and what you will need to do, should you wish to take part. This study is being conducted as part of an academic qualification (Doctorate in Clinical Psychology).

What is the purpose of the study?

The study will explore emotions (e.g. sadness, happiness, guilt) experienced by adults who have reported adverse childhood experiences, compared to those whose difficulties began in adulthood. It will also look at whether the quality of the relationship that adults had with their primary caregiver (usually a parent or guardian) during childhood affects the way they think about their emotions and respond to them.

How we experience emotions is an important factor in coping with traumatic experiences. By examining emotions, relationships and experiences of those who report childhood trauma and those who haven't, we may be able to inform future therapeutic interventions.

The study is also part of an educational project.

Why have I been invited?

You have been identified by your healthcare professional as **someone who has not reported childhood trauma**, you may therefore be able to provide information which helps us better understand the emotional experiences of this group. **Please do not opt into this study if you have experienced childhood trauma but have not disclosed this to your healthcare professional.**

Do I have to take part?

No, it is up to you. Your healthcare professional will describe the study and go through this information sheet, which you can take away and discuss with others if you want to. If you decide to take part we will arrange for the researcher to contact you and discuss the research further. We will then ask you to sign a consent form. You are free to withdraw at any time, without giving a reason. If you decide not to take part this will not affect the standard of care you receive.

What will happen to me if I take part?

You will meet with the researcher for approximately 60-90 minutes to complete questionnaires and a short task on a computer. Even if you have never used a computer before you should be able to take part as the researcher will help you. The computer task involves a series of words (e.g. joy, shame) appearing on screen and you must choose another word on screen which you associate with this (e.g. happy, disgust, self, friend). You will also be asked for your verbal feedback on participating in the study using a few brief questions. Your answers to these questions will be recorded on a tape recorder. The appointment usually takes up to 90 minutes but if you prefer we can complete the task in up to four shorter meetings.

What are the possible disadvantages or risks of taking part?

The questionnaires or computer task may bring up some sensitive topics but if you become distressed, you can take a break, miss out questions or withdraw from the study. If distressed, you will also be given the option of discussing your feelings further with your healthcare professional.

What happens if I don't want to carry on with the study?

You can leave the study at any time without giving a reason; this will have no effect on any other care or treatment you are receiving. Information already collected would be retained and used in the study. No further data would be collected and you would not be asked to complete any further measures.

What if you have questions or concerns?

If you have a concern about any aspect of this study, you should speak to the researcher who will do their best to answer your questions (Tel, 01334 696218 or write to Eimear McKay, Clinical Psychology Dept, Stratheden Hospital, Cupar KY15 5RR).

Will my taking part in this study be kept confidential?

All information, which is collected during the course of the study will kept strictly confidential and any information which could identify you will be replaced with a participant information number to anonymise it. This data will only be accessed by the primary researcher (Eimear McKay, Trainee Clinical Psychologist) and her supervisor, unless you indicate on the consent form that you would like your results to be shared with your healthcare professional. The data reported and presented to others will be anonymised so no-one could identify you or link you to your responses. The completed questionnaires will be kept securely for up to five years after which time it will be destroyed.

Any information discussed during sessions will be confidential, however if you disclose any information indicating risk of harm to yourself or others the researcher will have a duty of care to discuss this with your healthcare professional. You will also be informed of this, should that occur. With your permission, your GP will also be informed that you are participating in the study.

What will happen to the result of the study?

All identifiable data collected will be stored securely, anonymised and used for the study. The anonymised results of the study will be written up as part of an academic project and submitted as part of the University of Edinburgh Doctorate of Clinical Psychology training course requirements. It may also be published in an academic journal. You will not be identified in any report or publication.

Who is organising and funding the research?

This is a Doctorate of Clinical Psychology student project organised by the University of Edinburgh and NHS Fife.

Who has reviewed the Study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by the Fife & Forth Valley Research Ethics Committee.

If you have a complaint

If at any time you wish to make a complaint about any aspect of the study please contact NHS Fife Headquarters, Hayfield House, Hayfield Road, Kirkcaldy, Fife, KY2 5AH, and follow the standard NHS complaints procedure. Alternatively, you can contact Dr Andy Summers, ***Clinical Psychology Department. Lynebank Hospital,*** Fife. KY11 4UW or telephone 01383 565402/565403.

Further Information

If you have any questions or concerns regarding the study, please contact, Miss Tara Graham, Research and Development Psychologist by phone on (01334) 696218.

Or write to: Miss Tara Graham, ***Clinical Psychology Department. Stratheden Hospital, Cupar.*** Fife. KY15 5RR. Thank you

Appendix 17: Consent Form -CSA Group

NHS Fife

Consent Form

Please initial boxes

I confirm that I have read and understand the information sheet dated 15th November 2011(version 4) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

I understand that my participation is entirely voluntary and that I am free to withdraw at any time, without my medical care or legal rights being affected. ☐

I agree to being interviewed and the interview being tape recorded. ☐

I understand that all information about me will be kept strictly confidential and anonymised in any reports or publications. All information will be stored securely for up to 5 years and then destroyed in accordance with relevant guidelines. ☐

I would like the information from the completed questionnaires to be shared with my healthcare professional (NAME) in order to inform the service I receive. Y / N (please circle) ☐

I understand that a report detailing the results of the study will form part of an academic thesis. The results may be published for research and service development purposes. Any participant identifiable information will be removed. ☐

I agree to my GP (NAME) being informed that I am involved in this research study. ☐

I understand that I can withdraw from this study at any time, however all data already collected would be retained and used in the study. No further data would be collected or any other research procedures carried out. ☐

I understand that if I disclose information suggesting I am at risk of harming myself or others, this cannot be kept confidential and my healthcare professional (NAME) and GP will be informed. ☐

I understand that I can get a copy of the results when the study is completed and I would like to be contacted with these by post. Y / N (please circle) ☐

Participant

Name (print)	Date:	Signature
_____	_____	_____

Researcher (person taking consent)

Name (print)	Date	Signature

Appendix 18: Consent Form -NCT Group

NHS Fife

Consent Form

Please initial boxes

I confirm that I have read and understand the information sheet dated 15th November 2011(version 1) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

I understand that my participation is entirely voluntary and that I am free to withdraw at any time, without my medical care or legal rights being affected. ☐

I agree to being interviewed and the interview being tape recorded. ☐

I understand that all information about me will be kept strictly confidential and anonymised in any reports or publications. All information will be stored securely for up to 5 years and then destroyed in accordance with relevant guidelines. ☐

I would like the information from the completed questionnaires to be shared with my healthcare professional (NAME) in order to inform the service I receive. Y / N (please circle) ☐

I understand that a report detailing the results of the study will form part of an academic thesis. The results may be published for research and service development purposes. Any participant identifiable information will be removed. ☐

I agree to my GP (NAME) being informed that I am involved in this research study. ☐

I understand that I can withdraw from this study at any time, however all data already collected would be retained and used in the study. No further data would be collected or any other research procedures carried out. ☐

I understand that if I disclose information suggesting I am at risk of harming myself or others, this cannot be kept confidential and my healthcare professional (NAME) and GP will be informed. ☐

I understand that I can get a copy of the results when the study is completed and I would like to be contacted with these by post. Y / N (please circle) ☐

Participant

Name (print) _____ Date: _____ Signature _____

Researcher (person taking consent)

Name (print) Date Signature

Appendix 19: Skewness and Kurtosis z scores for data included in Journal Article 1

Table 2: Skewness & Kurtosis for Journal Article 1 data (* values in excess of 3.29, p<.001)

Measure		Skewness (z score)	Kurtosis (z score)
BES- In the last week			
	Anger	1.17	-0.58
	Sad	-1.59	-0.92
	Disgust	-2.09*	-1.55
	Anxiety	-4.24*	2.40*
	Happy	2.17*	0.60
BES- In General			
	Anger	-1.38	-0.83
	Sad	-1.84	-0.50
	Disgust	-2.32*	-0.86
	Anxiety	-3.48*	0.30
	Happy	1.07	0.21
BES- Coping			
	Anger	-1.17	-1.24
	Sad	-1.42	0.54
	Disgust	-4.1*	1.55
	Anxiety	-3.23*	0.66
	Happy	1.94	-0.16
REQ			
	External-Functional	3.09*	0.40
	Internal-Functional	-4.45*	-0.38
	External-Dysfunctional	5.45*	2.40*
	Internal-Dysfunctional	0.04	-1.82
PCL-C			
	Re-experience (Criterion B)	-1.8	-1.77
	Avoidance (Criterion C)	-3.09*	-0.25
	Hyperarousal (Criterion D)	-1.74	-0.86
	Total	-2.34*	-0.83
CORE			
	Subjective Well-being	-1.51	1.34
	Problems/Symptoms	3.83*	-1.60
	Functioning	-1.77	0.52
	Risk	2.25*	-1.45
	Non-Risk Items	-3.42*	1.98*
	Global distress	-2.29*	0.78

Appendix 20: Skewness and Kurtosis z scores for data included in Journal Article 2

Table 3: Skewness& Kurtosis for data (*=values in excess of 1.96, p<.05)

	CSA		Non trauma	
Measure	**Skewness (z score)**	**Kurtosis (z score)**	**Skewness (z score)**	**Kurtosis (z score)**
BES- In the last week				
Anger	-0.34	-0.61	1.27	-0.51
Sad	-1.47	-0.49	1.76	-0.72
Disgust	-0.82	-1.07	2.82*	0.66
Anxiety	-2.62*	1.06	-0.39	-0.84
Happy	0.57	-1.41	-2.10	0.19
BES- In General				
Anger	-0.76	-0.79	1.64	-0.38
Sad	0.43	0.99	1.16	-1.16
Disgust	-1.04	-1.01	2.56	1.79
Anxiety	-1.81	-0.21	0.11	-1.30
Happy	0.08	-1.44	3.17	1.39
BES- Coping				
Anger	-0.35	-0.62	0.12	-0.82
Sad	-1.10	-0.23	-0.83	-1.28
Disgust	-0.55	0.09	-0.25	-1.32
Anxiety	-1.23	0.29	0.14	-0.57
Happy	0.08	-1.44	3.17*	1.39
REQ				
External-Functional	2.76*	2.69*	0.45	-0.59
Internal-Functional	-0.30	1.67	0.48	1.47
External-Dysfunctional	2.68*	1.08	7.56	16.40
Internal-Dysfunctional	-0.09	-1.10	0.59	-0.41
PCL-C				
Re-experience (Criterion B)	-0.53	-1.24	0.98	0.17
Avoidance (Criterion C)	-1.23	0.93	1.28	-0.95
Hyperarousal (Criterion D)	-0.90	-0.42	-0.47	-1.37
Total	-0.64	-1.21	0.48	-1.57
CORE				
Subjective Well-being	-1.19	-0.79	0.491	-1.22
Problems/Symptoms	-0.80	-0.64	0.61	-1.29
Functioning	-0.76	-1.1	1.95	0.24
Risk	1.43	-1.45	3.24	1.28
Non-Risk Items	0.90	-0.97	0.88	-1.03
Global distress	-0.72	-1.1	0.92	-1.03
DES				
Total score	0.81	-1.25	1.2	-0.05
AAQ				
Total score	1.90	-0.38	0.56	-1.12
CFQ				
Fusion	-1.95	-2.37*	-0.24	0.56
Defusion	-2.14*	-0.97	0.90	-0.19
RQ				
Secure	1.73	-0.87	0	-1.60
Fearful	-1.05	-1.29	-0.06	-1.55
Preoccupied	0.44	-1.85	6.12	0.39
Dismissive	-0.33	0.99	0.18	-1.24

Appendix 21: Journal Article 2 Non Parametric statistics

Table 4: Spearman's Correlations (Bonferroni correction applied.) *Significant at the 0.01 level

	BES-W DISGUST	BES –W ANXIETY	BES-W HAPPY	BES-W SAD	BES-W ANGER	CFQ-15 DEFUSION
IAT composite score	-.349	**-.371****	.351	**-.396****	-.278	.223
	.013	**.008**	.012	**.004**	.050	.120
BES-G Disgust	**.931***	**.711***	**-.635***	**.765***	**.708***	**-.461**
	<.0005	**<.0005**	**<.0005**	**<.0005**	**<.0005**	**.001**
	BES- G DISGUST	**BES- G ANXIETY**	**BES-G HAPPY**	**BES-G SAD**	**BES-G ANGER**	**CFQ-15 FUSION**
IAT composite score	-.301	-.213	.351*	-.358	-.222	-.348
	.033	.137	.012	.011	.120	.013
BES-G Disgust		**.668***	**-.635***	**.817***	**.704***	**.700***
		<.0005	**<.0005**	**<.0005**	**<.0005**	**<.0005**
	BES- C DISGUST	**BES- C ANXIETY**	**BES-C HAPPY**	**BES-C SAD**	**BES-C ANGER**	
IAT composite score	-.128	-.273	-.108	-.312	-.131	
	.374	.055	.454	.027	.366	
BES-G Disgust	**.517***	**.418***	**.509***	**.443***	**.543***	
	<.0005	**.002**	**<.0005**	**.001**	**<.0005**	
	REQ internal functional	**REQ internal dysfunctional**	**REQ external functional**	**REQ external dysfunctional**	**DES**	
IAT composite score	.059	-.158	.005	.192	-.231	
	.683	.274	.971	.182	.106	
BES-G Disgust	-.258	**.712***	.347	**-.462***	**.733***	
	.068	**<.0005**	.012	**.001**	**<.0005**	
	PCL-C TOTAL	**PCL-C RE-EXPERIENCING**	**PCL-C AVOIDANCE**	**PCL-C HYPERAROUSAL**	**CORE RISK**	
IAT composite score	-.355	-.189	-.384	-.323	-.287	
	.011	.189	.006	.022	.043	
BES-G Disgust	**.836***	**.602***	**.800***	**.832***	**.684***	
	<.0005	**<.0005**	**<.0005**	**<.0005**	**<.0005**	
	CORE GLOBAL DISTRESS	**CORE GLOBAL DISTRESS-RISK**	**CORE WELL-BEING**	**CORE PROBLEMS**	**CORE FUNCTIONING**	
IAT composite score	-.365	-.365	-.399	-.328	-.357	
	.009	.009	.004	.020	.011	
BES-G Disgust	**.854***	**.857***	**.815***	**.816***	**.842***	
	<.0005	**<.0005**	**<.0005**	**<.0005**	**<.0005**	

Table 5: Independent samples Mann-Whitney U test

			Independent samples Mann Whitney U test
	Mean	Standard Error	Sig. (2-tailed)
BES- W HAPPY			**.011***
CSA	3.72	.25	
Non CSA	4.74	.28	
BES-W DISGUST			**<.005**
CSA	3.90	.31	
Non CSA	1.88	.22	
BES- W FEAR			**.005***
CSA	5.23	.28	
Non CSA	4.09	.31	
BES-W SAD			**.003***
CSA	4.04	.30	
Non CSA	2.58	.28	
BES-W ANGER			**.001***
CSA	4.20	.25	
Non CSA	2.93	.24	
BES-G HAPPY			.007
CSA	2.62	.23	
Non CSA	1.76	.22	
BES-G DISGUST			**<.005***
CSA	4.39	.30	
Non CSA	2.12	.22	
BES-G FEAR			.093
CSA	5.22	.28	
Non CSA	4.42	.33	
BES-G SAD			**.008***
CSA	4.36	.32	
Non CSA	3.04	.33	
BES-G ANGER			.018
CSA	4.28	.30	
Non CSA	3.30	.27	
BES-C HAPPY			.007
CSA	2.62	.23	
Non CSA	1.76	.22	
BES-C DISGUST			.091
CSA	4.70	.25	
Non CSA	3.93	.33	
BES-C FEAR			.383
CSA	4.75	.25	
Non CSA	4.45	.26	
BES-C SAD			.223
CSA	4.68	.26	
Non CSA	4.10	.31	
BES-C ANGER			.189
CSA	4.43	.25	
Non CSA	3.93	.32	

Table 6: Independent samples Mann-Whitney U test

		Independent samples	Mann Whitney U test

	Mean	Standard Error	Sig. (2-tailed)
REQ INTERNAL FUNCTIONAL			.605
CSA	3.01	.10	
Non CSA	2.93	.12	
REQ INTERNAL DYSFUNCTIONAL			.022
CSA	3.06	.19	
Non CSA	2.43	.14	
REQ EXTERNAL FUNCTIONAL			.74
CSA	2.50	.14	
Non CSA	2.87	.16	
REQ EXTERNAL DYSFUNCTIONAL			.251
CSA	1.70	.12	
Non CSA	1.55	.13	
DES			**<.0005***
CSA	34.97	4.37	
Non CSA	13.51	1.79	
PCL-C TOTAL			**<.0005***
CSA	55.80	3.12	
Non CSA	33.88	2.14	
PCL-REEXPERIENCING			**<.0005***
CSA	16.57	1.12	
Non CSA	9.52	.67	
PCL-C AVOIDANCE			**<.0005***
CSA	22.42	1.48	
Non CSA	13.84	1.19	
PCL-C HYPERAROUSAL			**<.0005***
CSA	16.80	.97	
Non CSA	10.52	.68	
CORE-GLOBAL DISTRESS			**<.0005***
CSA	1.94	.18	
Non CSA	1.01	.13	
CORE GLOBAL DISTRESS-RISK			**<.001***
CSA	.83	.19	
Non CSA	.12	.16	
CORE SUBJECTIVE WELL-BEING			**<.001***
CSA	2.40	.23	
Non CSA	1.32	.20	
CORE PROBLEMS/SYMPTOMS			**.002***
CSA	2.36	.21	
Non CSA	1.36	.17	
CORE FUNCTIONING			**<.002***
CSA	1.93	.18	
Non CSA	1.01	.15	
CORE RISK			**<.001***
CSA	.83	.17	
Non CSA	.12	.04	
CFQ-15 FUSION			.020
CSA	44.57	2.86	
Non CSA	36.04	2.49	
CFQ-15 DEFUSION			.252
CSA	24.53	1.74	
Non CSA	27.08	1.17	

Factor	**Level / Units**	**Mean or Nos (Sd or %)**

Appendix 22: Descriptive data, means and standard deviations for all three samples.

Table 7: Descriptive data for all three samples included in the thesis

		CSA sample STUDY 1 (n=109)	CSA group STUDY 2 (n=26)	No childhood trauma group STUDY 2 (n=25)
Age	Years	35.5 (9.9)	45.5 (12.54)	38.6 (13.3)
Gender	Males	15(13.8%)	3 (11.5%)	2 (8%)
	Females	85(78%)	23 (88.5%)	23 (92%)

Table 8: Means and standard deviations for all three samples on each of the measures.

Measure	Subscale	CSA Group STUDY 1 Mean	CSA Group STUDY 1 (SD)	CSA Group STUDY 2 Mean	CSA Group STUDY 2 (SD)	NCT Group STUDY 2 Mean	NCT Group STUDY 2 (SD)
BES-Weekly	Anger	4.67	(1.2)	4.20	(1.28)	2.93	(1.22)
	Sad	4.63	(1.3)	4.04	(1.56)	2.58	(1.43)
	Disgust	4.64	(1.6)	3.90	(1.59)	1.88	(1.13)
	Anxiety	5.51	(1.1)	5.23	(1.43)	4.09	(1.55)
	Happy	3.25	(1.2)	3.72	(1.28)	4.74	(1.44)
BES-General	Anger	4.93	(1.2)	4.28	(1.56)	3.30	(1.38)
	Sad	4.78	(1.3)	4.36	(1.65)	3.04	(1.68)
	Disgust	4.93	(1.2)	4.39	(1.55)	2.12	(1.11)
	Anxiety	5.70	(1.0)	5.22	(1.47)	4.42	(1.65)
	Happy	3.5	(1.3)	2.62	(1.22)	4.00	(1.76)
BES-Coping	Anger	4.97	(1.2)	4.43	(1.31)	3.93	(1.62)
	Sad	5.12	(1.1)	4.68	(1.35)	4.10	(1.58)
	Disgust	5.31	(1.2)	4.70	(1.30)	3.93	(1.68)
	Anxiety	5.5	(1.0)	4.75	(1.32)	4.45	(1.34)
	Happy	3.33	(1.5)	2.62	(1.22)	1.76	(1.12)
REQ	External-Functional	2.3	(0.8)	2.50	(0.76)	2.87	(0.80)
	Internal-Functional	2.5	(0.7)	3.01	(0.54)	2.93	(0.64)
	External-Dysfunctional	2.1	(0.9)	1.70	(0.62)	1.55	(0.66)
	Internal-Dysfunctional	3.5	(0.7)	3.06	(0.97)	2.43	(0.70)
PCL-C	Re-experiencing	18.2	(5)	16.57	(5.71)	9.52	(3.39)
	Avoidance	25.6	(5.9)	22.42	(7.56)	13.84	(5.98)
	Hyperarousal	18.1	(4.3)	16.8	(4.96)	10.52	(3.44)
	Total	18.2	(5)	55.80	(15.92)	33.8	(10.74)
CORE	Subjective Well-being	3.0	(0.7)	2.40	(1.20)	1.32	(1.03)

	Problems/Symptoms	2.9	(0.8)	2.36	(1.11)	1.36	(0.86)
	Functioning	2.4	(0.7)	1.93	(0.93)	1.01	(0.77)
	Risk	1.3	(0.9)	0.84	(0.90)	0.12	(0.20)
	Non-Risk Items	2.7	(0.7)	2.18	(1.01)	1.20	(0.80)
	Global distress	2.5	(0.7)	1.94	(0.96)	1.01	(0.68)
DES	Total score			34.97	(22.28)	13.51	(8.97)
CFQ-15	Fusion			44.57	(14.11)	36.5	(12.5)
	Defusion			24.53	(8.90)	27.08	(5.87)
AAQ	Total			44.26	(11.44)	37.5	(7.64)

Appendix 23: Findings relating to cognitive fusion, experiential avoidance and attachment (not included in Journal Article 2- removed in accordance with viva requirements).

Introduction

The relationships between cognitive fusion, experiential avoidance and implicit disgust are also explored in this thesis. Cognitive fusion is a term associated with third wave cognitive behavioural therapies such as Acceptance and Commitment therapy (ACT; Hayes et al., 2002). Cognitive fusion is used to describe difficulty distinguishing between thoughts and related experiences (Eifert & Forsyth, 2005; Hayes et al., 1999). An individual tends to become attached to the thought and this thought is reflected in action, for example, an individual with social phobia might imagine they are being judged and humiliated in the supermarket and might deal with the situation as if this were the case by removing themselves from the supermarket. It is hypothesised that response latencies on the IAT are likely to be quicker the more attached the individual is to the concept on screen, for example if an individual believes themselves to be disgusting they will respond to self and disgust superordinate categories much more quickly when they appear on screen.

A second process associated with ACT is experiential avoidance (Hayes, Strosahl, & Wilson, 1999). This is a type of emotion regulation strategy whereby individuals attempt to suppress, alter avoid difficult internal experiences such as thoughts or sensations. Experiential avoidance (EA) has been associated with psychopathology. There have been links made between the PTSD symptom severity and experiential avoidance (Tull, Gratz, Salters, & Remer, 2004). EA has been found to be mediator in the relationship between childhood trauma and PTSD symptoms (Shenk, Putnam, & Noll, 2012). As shown in Study 1, disgust has been shown to be a predictor of PTSD symptoms in survivors of CSA. This thesis will examine the relationship between implicit, explicit disgust and EA. The concept of cognitive fusion and its relationship to implicit disgust self-concept will also be explored.

Hypothesis: Cognitive fusion and EA will be associated with implicit disgust (relative to happiness) on the IAT.

Method:

See Chapter 3: Methodology and Chapter 5: Journal Article 2 for a comprehensive description of the methodology employed. In addition to the measures included in Journal Article 2, the following measures were also completed by participants.

Measures:

Cognitive Fusion-15 questionnaire **(CFQ-15; Gillanders et al., 2010**) contains fifteen questions which have been developed to examine domains associated with cognitive fusion (i.e. how closely one identifies with one's thoughts or internal experiences) and defusion. It contains items which relate to perspective taking, entanglement with one's thoughts and believability of thoughts. Participants are required to rate statements according to "how true" they believe them to be on a seven point Likert scale ranging from 1=never true to 7=always true. Higher scores on this measure indicate a greater degree of cognitive fusion.

The measure has demonstrated good reliability (Cronbach's α=0.89 for fusion and 0.73 for defusion scales) in four separate community dwelling samples, as well as excellent test-retest reliability over a one month period (Fusion: *r*=0.82; Defusion *r*=0.84). Good reliability has also been demonstrated in clinical samples (with Cronbach α values ranging from α=0.60–0.90).

Acceptance & Action Questionnaire II **(AAQ II; Bond *et al*., 2011):** is a 10 item questionnaire examining experiential avoidance – that is a person's ability to be in contact with their thoughts and feelings without attempting to avoid, suppress or change the content of these thoughts. Higher scores indicate higher levels of experiential avoidance. Participants are required to rate each of the ten statements on a seven point Likert scale, ranging from 1=never true to 7=always true. Good construct validity has been established through a range of convergent, predictive and discriminate validity studies with other measures such as the Beck Anxiety Inventory (BAI; Beck & Steer, 1990), Beck Depression Inventory II (BDI-II; Beck, Steer, & Brown, 1996; and the Global Severity Index of the Symptom Checklist 90 – Revised (SCL-90-R-GSI; DeRogatis, 1992).

(Participants were also asked to complete The Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991). The findings are reported in the Chapter 7- additional results section.)

Results

Table 9: Means and standard deviations for the variables in both the group of CSA survivors and non-trauma group.

Measure	Subscale	CSA Group Mean	CSA Group (SD)	NCT Group Mean	NCT Group (SD)
CFQ-15	Fusion	44.57	(14.11)	36.5	(12.5)
	Defusion	24.53	(8.90)	27.08	(5.87)
AAQ	Total	44.26	(11.44)	37.5	(7.64)

Cognitive fusion and experiential avoidance

There were no significant differences between the two groups on the CFQ-15 or the AAQ -II.

Table 10: Independent samples t-test for the measures of cognitive fusion and experiential avoidance.

	CFQ-15 DEFUSION	CFQ-15 FUSION
IAT effect measure	0.05	**CFQ-15 FUSION**
BES-G	0.68	**CFQ-15 FUSION**
Disgust	**-0.48***	**.698***
	<0.0005	**<0.0005**

	Mean	Standard Error	Levene's Test for Equality of Variances F	Sig	T-test for equality of means t	df	Sig. (2-tailed)	Mean Difference	Effect size
CFQ-15 FUSION			0.92	0.34	2.24	49	0.03	8.53	0.30
CSA	44.57	2.86		2					
Non CSA	36.04	2.49							
CFQ-15 DEFUSION			5.63	0.02	-1.20	43.4	0.23	-2.54	0.17
CSA	24.53	1.74							
Non CSA	27.08	1.17							
AAQ-II			3.82	.056	2.45	49	0.018	6.70	0. 21
CSA	44.26	2.24							
Non CSA	**0.001**								

Hypothesis: Cognitive fusion will be associated with response latencies for self-disgust concept (relative to happiness) on the IAT.

IAT scores were associated with cognitive fusion. Higher levels of implicit disgust appeared to be related to higher levels of cognitive fusion (see Table 39). Explicit trait disgust demonstrated a significant relationship with experiential avoidance, cognitive fusion and defusion.

Table 11: Summary of Pearson correlations (Bonferroni correction applied.) *Significant at the 0.01 level

Discussion

Higher levels of implicit disgust were positively associated with higher levels of cognitive fusion. Explicit trait disgust also demonstrated a significant relationship with cognitive fusion and defusion. One might expect cognitive fusion to be associated with the measurement of an implicit self-concept, because the term embodies the idea that an individual cannot make a distinction between thoughts and the related experiences (Eifert & Forsyth, 2009; Hayes et al., 1999). In simplistic terms, the individual might literally become "attached" to the thought that "I am disgusting" – the thought is believed and guides action. In this case, the action is a disgust congruent response on the IAT.

Response latencies are likely to be quicker the more attached the individual is to the negative thought. Similar limitations apply to the interpretation of this finding as those for Hypothesis 2. It may be that cognitive fusion is associated with a negative self-concept, rather than a disgust related self-concept. This is due to the use of a negative and positive target words in the task. Cognitive fusion has been associated with a range of psychopathology (e.g., psychosis, anorexia and depression; Bach & Hayes, 2002; Eifert et al. 2009; Gaudiano & Herbert, 2006; Hayes & Pankey, 2002; Twohig, Masuda, Varra, & Hayes, 2005; Zettle & Hayes, 1986). Future research should explore the relationships between different forms of implicit emotion related self-concept, cognitive fusion and psychopathology. It is interesting that there were no significant associations between experiential avoidance and implicit disgust. Experiential avoidance is an emotion regulation strategy, so this finding is consistent with the lack of association between implicit disgust and emotion regulation strategies as measured by the REQ. It is possible that emotion regulation strategies associated with explicit emotion or emotion that occurs at the schematic level do not relate to implicit emotion occurring at an associative level.

Acceptance and commitment therapy processes

Previous research has shown that female survivors of CSA are more likely to use avoidance related coping strategies to deal with distressing thoughts and feelings (Marx & Sloan, 2002; Poluny & Follette, 1995). In this study the CSA group showed significantly higher levels of experiential avoidance than the NCT group. Individuals who use experiential avoidance as a coping strategy are more likely to experience psychological distress (Plumb, Orsillo & Luterek, 2004). Marx and Sloan (2002) found that avoidance mediates the relationship between a history of CSA and psychological difficulties. In terms of ACT processes, this finding would suggest that it is not the experience of CSA that leads to psychological difficulties but rather how one relates to internal experiences, for example attempting to suppress or control them. The finding that explicit disgust was associated with experiential avoidance as measured by the AAQ is therefore logical. If one experiences high levels of disgust, it is probable that attempts to avoid one's internal experience are increased. It would be interesting to explore this hypothesis further using a mediation analysis to understand the relationship between disgust, experiential avoidance and psychological distress.

The relationship between cognitive fusion and implicit disgust is also plausible. If one holds disgust-related beliefs and cognitions about the self as literally true (fusion), it is likely that response latencies on an IAT will be quicker when disgust-related terms appear on screen. Experiential avoidance could therefore be considered a way of controlling the experience of self-

disgust as a consequence of cognitive fusion. In theory, the individual could become 'stuck' in a pattern of re-experiencing and avoidance consistent with the emotion non-specific component of PTSD (Dalgleish & Power, 2004). A caveat to this interpretation of the results is the high correlations (r=.73 and r=.71) previously observed between the CFQ-15 –cognitive fusion and AAQ-II-experiential avoidance measures, which could indicate conceptual overlap (Gillanders *et al.,* 2010).

The systematic review highlighted the lack of an ACT treatment study for psychological difficulties in survivors of CSA. The preliminary findings in the current study suggest such a treatment study is warranted.